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Melinda S. Barrett

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IDENTIFICATION OF HEALTH EDUCATION COMPETENCY IN  
SCHOOL NURSE CERTIFICATION PROGRAMS: MULTIPLE CASE STUDY

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Philosophy

Melinda S. Barrett

Indiana University of Pennsylvania

December 2017

Indiana University of Pennsylvania  
School of Graduate Studies and Research  
Department of Nursing and Allied Health Professions

We hereby approve the dissertation of

Melinda S. Barrett

Candidate for the degree of Doctor of Philosophy

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Kristy S. Chunta, Ph.D.  
Associate Professor of Nursing and Allied Health  
Professions, Chair

---

---

Teresa C. Shellenbarger, Ph.D.  
Professor of Nursing and Allied Health Professions

---

---

Diana Louise Rupert, Ph.D.  
Assistant Professor of Nursing and Allied Health  
Professions

ACCEPTED

---

Randy L. Martin, Ph.D.  
Dean  
School of Graduate Studies and Research

---

Title: Identification of Health Education Competency in School Nurse Certification Programs: Multiple Case Study

Author: Melinda S. Barrett

Dissertation Chair: Dr. Kristy S. Chunta

Dissertation Committee Members: Dr. Teresa C. Shellenbarger  
Dr. Diana Louise Rupert

The purpose of this study was to explore and describe health education competency activities in both classroom and clinical settings within school nurse certification programs. Health education competency was explored within the context of and as defined by the American Nurses Association (ANA) and the National Association of School Nurses (NASN) Standards of School Nursing Practice and Professional Performance (SOSNP).

A qualitative multiple case study design utilized interviews with faculty teaching in school nurse certification programs and examination of program curricula, course descriptions, and researcher field notes in order to glean rich descriptive data regarding health education competency. Interviews with faculty and examination of supporting documents from school nurse certification programs allowed investigation of both the didactic and clinical experiences of nurses taking part in school nurse certification programs. This method facilitated exploration of faculty descriptions and experiences in teaching this specialty group and identification of gaps or needs in preparation of nurses for the role of health educator.

Study participants helped gather information about educational preparedness and continuing education needs of today's school nurse. This data may assist in evaluation and development of academic curricula, school nurse certification programming, and professional development education. Attention to the changing needs of stakeholders including the school-age population, families, communities, and healthcare providers enhances the provision of safe,

quality, and evidence-based practice. Themes of having a voice, knowing the law, advocacy, leadership, preparation to teach, and collaboration all point to issues of preparing skilled clinicians for transition to an advanced practice, autonomous role as a school nurse. All play a part in training the school nurse for preparation to practice in the role of an educator. Speaking about the unique qualities and benefits of having school nursing professionals highly attuned and capable of meeting the needs of today's students, families, and communities is invaluable for health prevention and promotion.

## ACKNOWLEDGEMENTS

“Whatever you are, be a good one.” Credit to two very wise men, Abraham Lincoln and my Dad, Jim Graybill. It’s difficult to put into words how my Dad’s encouragement, faith, and belief that hard work, remaining morally true, and persistence could allow me to “be a good one”, whatever that might be. I dreamt of being a nurse for as long as I can remember. My parents, Ellen and Jim, were models of stability and promoted independent thinking from early on. For all of those qualities, I thank them and I am confident they are smiling down on me as they tell their friends in heaven about their daughter, “She’s a nurse, you know. And now she’s got her PhD.” Thanks and love to Mom and Dad.

I do not think there has been a time where my 3 amazingly resilient children haven’t seen me writing papers, preparing projects, and saying things like, “Please, guys, I just need a couple hours to work on my paper.” or “Let’s order pizza. I really need to write this evening.” Ellen, Katie, and Adam- you need to know how much I love you and value the maturity, patience, and understanding you all possess that is way beyond your years. I am hoping that watching and participating in my journey down the doctoral road has instilled the same values of persistence, hard work, and dedication that my parents passed to me. I am so proud of you!!!

There is one person who has been part of my life’s journey, unwavering in support, encouragement, and love. My soulmate and twin sister, Lucinda Graybill-LeClerc, PhD, has been my rock and voice of reason throughout the trials of reaching dissertation defense day. She has calmly and patiently talked me off the anxiety ledge when I have wanted to quit or cried in frustration. Her words from 6 years ago as I started in a doctoral program, “Melinda and I are true soul mates in the most marvelous way. We both knew from our evenings on the porch studying for undergraduate nursing tests that one day we would be in a much different place, that we would become experts in nursing, that we would become leaders of a new generation of nurses. We have paced each other through diploma RN, BSN, MSN, and now doctoral study. It’s been over 20 years in the making but we’re here.” I have looked to her achievements in obtaining her PhD in nursing, scholarly work, and leadership abilities with awe and great respect.

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## CHAPTER ONE

### AIM OF THE STUDY

School nurses are in a unique position to provide care for students with special health care needs in the school setting. Nurses in the school setting are now caring for students with increasingly acute and complex health-related issues (Spriggle, 2009). Thus, requiring that nurse educators prepare school nurses for multifaceted practice and ensure they have access to educational experiences that enhance their ability to function competently and autonomously. According to the United States Department of Education, National Center for Education Statistics (2016), 50.4 million students are enrolled in close to 98,300 public schools across the country.

It is extraordinary to realize that school nurses have the potential to educate and care for such an expansive part of the population. The scope of school nursing practice is broad and dependent upon education, experience, role, work environment and the population served (American Nurses Association, 2011). This broadly defined scope of practice creates a challenge for development of school nurse certification curricula designed to meet the advanced practice needs of this highly autonomous role.

What constitutes preparing nurses for practice is an ever-evolving issue requiring attention from both academia and clinicians (Watt & Pascoe, 2013). Although this description of the preparedness to practice issue is broad and commonly applies to graduate nurses in general, this study narrowed the focus by examining factors needed to prepare school nurses for the responsibility of educating individual students, families, professional and paraprofessional school staff, legislators, and aggregate populations. Chapter one begins by describing the complexities surrounding school nurse preparation to practice followed by justification of the

study, context, assumptions, and biases. A qualitative multiple case study design was the method of inquiry. The chapter concludes by presenting relevance of this study for the nursing discipline.

### **Phenomenon**

Nurses entering the school setting are faced with management of both chronic and acute healthcare conditions, health promotion, and education needs for individuals, families, and populations. Health education competency is an advanced level standard of professional performance described broadly in several national-level documents meant to guide academic and professional development practices. The Healthy People Curriculum Task Force developed the *Clinical Prevention and Population Health Curriculum Framework* endorsed by clinical professional associations including the American Association of Colleges of Nursing (AACN) (AACN, 2011). The AACN suggests initiation of proficiency in educational program development in areas of health promotion and protection (AACN, 2011). The educational competencies are described in greater detail as they relate to academia in the *AACN Essentials of Master's Education*. Here, educational competency is defined as the master's-prepared nurse's ability to apply and “integrate broad, organizational, patient-centered, and culturally responsive concepts into daily practice” (AACN, 2011, p.5).

Building upon the *Clinical Prevention and Population Health Curriculum Framework* and the *Essentials of Master's Education*, school nursing utilizes the *Nursing Standards of School Nursing Practice and Professional Performance* (SOSNP) to describe the school nurse health education competency more specifically. The SOSNP related to health education and promotion describe competency as being able to synthesize empirical evidence and theories “when designing health education information materials, activities, and programs, conducts

personalized health teaching and counseling considering comparative-effectiveness research recommendations, and participates in evaluation of health curricula” (ANA, 2011, p. 45). Health teaching competency is a complex nursing skill that requires knowledge of pedagogy, identification of learning objectives and needs of the learner, and skill in evaluating outcomes.

Health care professionals, specifically school nurses, seated in the educational setting serve to support academic success by promoting physical and mental health well-being. Healthy students spend more time in the classroom, receiving more instructional time and less work-time loss for parents. Health screenings, monitoring, and education by school nurses allows identification of vision, hearing, growth, dental, and mental health problems that, if gone undetected, result in barriers to learning. In a systematic review of research related to the impact of school nurse’s in America’s elementary schools, Lineberry and Ickes (2015) found evidence that nurse-led educational interventions resulted in knowledge gains for students. For example, students increased and retained information about spread of infection, nutrition choices, and mental health. Findings such as these support the importance of school nurses being competent in the development and implementation of health education programs and interventions.

School nurse led teaching has resulted in student changes in their health care related knowledge and beliefs. Exploration of school nurse and teacher led sexually transmitted infections/human immunodeficiency virus (STI/HIV) prevention knowledge and skills education by Borawski et al. (2015) demonstrated that nurses teaching in the classroom make lasting and valuable contributions to student’s knowledge base. Students receiving educational instruction from school nurses retained information longer than when information was provided by health teachers (Borawski et al., 2015). However, school nurses were less likely to be described by students as being prepared, at ease, or inspiring them to think about their health, while groups

taught by both nurses and teachers reported improved knowledge regarding STI/HIV. School nurses have described factors such as lack of training in content areas, time, and resources as roadblocks to developing and implementing educational programs (Khubchandani, Telljohann, Price, Dake, & Hendershot, 2013). These findings support the value of school nurses as educators but identify areas of weakness in preparation to teach, training on pertinent content areas, comfort level, and skill in challenging students with self-reflection. Consideration of these factors added more credence to exploring health education competency in preparation of school nurses.

Additionally, school nurses ensure appropriate health-related accommodations are provided for individual student needs in accordance with both federal and state regulations. Maintaining and ensuring compliance with regulations of the Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act, and the Americans with Disabilities Act (ADA) require the school nurse to be literate and able to educate others about these laws. Thus, the school nurse serving in the educator role touches almost every aspect of practice including teaching of students, unlicensed personnel, staff, families, administrators, community members, interdisciplinary team members, and fellow school nurses.

### **Justification**

School nursing has evolved into a specialty requiring care for increasingly complex student health needs, interdisciplinary coordination of care including delegation, outcomes identification, leadership, program management, and exceptional communication skills (ANA, 2011). Appropriate academic and clinical preparation to practice in this dynamic setting is essential to provide quality care and achieve optimal outcomes. Literature related to school nurse academic or clinical preparation, continuing education, or current day practice needs is

sparse. The need exists to evaluate the currency and relevance of how nurses are being prepared to meet the challenges of the unique and demanding school nurse role. Professional competency is described succinctly in the *NASN Code of Ethics with Interpretive Statements for the School Nurse* (NASN, 2010) in the following way: “The profession of nursing is obligated to provide competent nursing care and the school nurse must be aware of the need for continued professional learning and must assume personal responsibility for currency of knowledge and skills” (Professional Competency section, para. 2).

Preparation of nurses to practice in school settings is dependent upon sundry state regulations without consistency throughout the nation. Credentialing and continuing education requirements vary greatly across the country with 66% of states having school nurse title protection while 41% of states lack any continuing education requirements for practice (Praeger & Zimmerman, 2009). Title protection defines which professional body or organization authorizes the protected title for school nurses. The authorizing body varies by state and is most often the state Department of Education but may be the state Department of Health, or school district. The Arizona Board of Nursing is the only board of nursing found to authorize the title of school nurse (Praeger & Zimmerman, 2009). Although every state identifies an authorizing agency for credentialing, 66% of states have school nurse title protection (Praeger & Zimmerman, 2009). Essentially, this means that the school nurse credential may only be used in states with title protection (Praeger & Zimmerman, 2009).

To further complicate school nurse preparation, entry into practice as a school nurse ranges from practical nurse licensure (LPN), registered nurse (RN) licensure, RN licensure plus specialty certification, or a baccalaureate degree in nursing (BSN).

As reported by the American Academy of Pediatrics (AAP) Council on School Health (2008) (as cited in Lineberry & Ickes, 2015), credentialing as a school nurse should, at the very least, entail registered nurse licensure, BSN, and supplementary training specific to school nurse practice. In Pennsylvania, for example, a certified school nurse must possess: a BSN, Pennsylvania license as an RN, school nurse certification, and have a Level I Certificate as an Education Specialist from the Pennsylvania Department of Education (Pennsylvania Association of School Nurses and Practitioners, 2014). According to the Joint State Government Commission (2004), an educational specialist is a skilled provider, such as a nurse or social worker, who does not teach in the classroom.

Additionally, as an example of the level of preparation required by some states as opposed to others, Pennsylvania school nurses' continuing education requirements include completion of six credits of collegiate study, six credits of continuing education courses, or 180 hours of continuing professional education programs, activities, or learning experiences every five years for maintenance of school nurse certification (National Association of State Boards of Education [NASBE], 2014). Public school laws dating from the 1950's and 1960's mandate one certified school nurse per 1,500 students and provision of school nursing services to private and parochial schools by the public school system (NASBE, 2014). In contrast to PA regulations, states such as Hawaii, Idaho, and South Carolina lack title protection, mandates for provision of school nursing services, or requirements for continuing education.

Educational preparation, credentialing, professional oversight, and continuing education guidelines for the school nurse specialty vary greatly across the United States. Demonstration of the educational preparation and credentialing disparities is depicted in the NASN 2013 School Nurse Survey showing the vast majority of respondents being registered nurses (RNs) (93.5%),

4.3% were licensed practical nurses (LPNs), and 1.9% were advanced practice nurses (Maughan & Mangena, 2014). Additionally, educational levels of respondents of the 2013 NASN Survey were: 44.4% with a BSN, 15.1% with an associate's degree (AD) in nursing, 10.9% held a master's degree (MS/MSN), and 17.2% held a master's in a field outside of nursing (Maughan & Mangena, 2014). Across the nation, 20.9% of school nurses held certification at the national level and 48.5% at the state level (Maughan & Mangena, 2014). The data depict a highly educated workforce with many nurses possessing specialty certification but a dearth exists in evidence to demonstrate school nurse preparation to serve as a health educator equipped to meet the varied needs of today's school-age population. Borawski et al. (2015), Lineberry and Ickes (2015), and Khubchandani et al. (2013) described school nurse educational strengths as being able to impart lasting knowledge but falling short in being prepared, at ease, and lacking in time, resources, and privacy. Exploration of educational practices of certification programs, specifically related to the school nurse as health educator role, may assist in bridging this classroom-to-practice gap.

There are 12 universities or colleges across Pennsylvania with school nurse certification programs, either as part of a master's in nursing program or a separate certification program. Separate school nurse certification programs vary from requiring 13 to 21 credits and typically require a clinical practicum experience. Upon review of course descriptions from various academic institutions across the nation offering coursework for credentialing as a school nurse, either via certification or as part of BSN or MSN completion program, courses commonly found included educational psychology, counseling, exceptionalities, and some type of clinical internship. Courses are described generally without specific details regarding pedagogy or activities that may indicate alignment with the SOSNP competencies. For example, it is difficult

to discern if competencies such as leadership, health education, evidence-based practice, and program management are interwoven within the curricula. Review of program-specific materials and interviews with school nurse educators may unearth information regarding how health education and other SOSNP competencies are being taught.

### **Purpose**

School nursing encompasses a wide array of professional responsibilities such as direct patient care, health education, and advocacy. The purpose of this study was to describe faculty-identified health education competency activities in both classroom and clinical settings as well as curricula, course content, researcher field notes, and assignments within school nurse certification programs. Health education competency as defined by the ANA and NASN SOSNP is the school nurse employing strategies to promote a healthy and safe environment, especially regarding health education (ANA, 2011). These standards are nationally recognized benchmarks for professional practice and performance of the school nursing specialty. The SOSNP “are authoritative statements of the duties that school nurses, regardless of role, population, or specialty within school nursing, are expected to competently perform” (ANA, 2011, p. 4). Examples of health teaching and promotion competencies used by school nurses may include needs assessments for individuals as well as groups and utilization of research-based information when planning and implementing teaching programs (ANA, 2011). Specific aims of the study were to:

1. Describe strategies school nurse certification programs are employing to prepare nurses to assume the role of health educator according to the ANA/NASN School Nursing Standards of Practice.

2. Determine if there are gaps in school nurse certification programs in the area of health education and teaching.

The aims of the study were designed to answer the research question: How have school nurses been prepared to act as a health educator in meeting the complex health needs of student populations according to the ANA/NASN School Nursing Health Education and Promotion Standard of Practice? Although this study specifically examined the health education and promotion standard of professional performance and practice, other standards such as outcomes identification, planning, implementation, evaluation, communication, use of evidence-based practice, leadership, and program management were left open for exploration in order to fully understand academic preparation as well as practice needs of today's school nurse.

### **Context**

Faculty identification of health education competency in school nurse certification programs and examination of curricula, assignments, course descriptions, and researcher field notes were explored within the specific context of examining the school nurse as health educator role. Situational context is described by Munhall (2012) as the situation in which you and others currently are with all the contingencies that exist at the moment and as you progress in the study. As interviews were conducted, attention was paid to the individual as well as the institution's situational context. For example, it was noted whether a faculty interviewee teaching school nurse certification classes has had any experience as a school nurse. This provided a different situational context as compared to faculty who are concurrently practicing as a school nurse or who have had prior experience in the field versus those who have not.

## **Assumptions, Biases, Experiences**

Credentialing requirements vary across the country with entry into practice as a school nurse ranging from practical nurse licensure, registered nurse licensure, registered nurse licensure plus specialty certification, or a BSN. Some states lack any continuing education requirements or title protection describing credentialing requirements for school nurse practice. Pennsylvania and 26 other states require a school nurse credential, whether it be a license or certificate to be recognized as a school nurse (Praeger & Zimmerman, 2009). It is suspected that school nursing certification curriculum and student clinical experiences may not be reflective of health education practices necessary to meet the needs of current day school nurse practice. This may be true due to the demanding, autonomous, and dynamic nature of school nursing as demonstrated by the changing needs of students, families, communities, and healthcare providers.

This supposition is based on personal experience as a school nurse and the reality that practice in the current-day school setting has changed and continues to evolve from care of acute illness and injury to management of chronic conditions such as diabetes, hypertension, and mental illness. Additionally, school nurses are answering the need for development and implementation of health education to individuals, classes, families, staff, and the community. Having worked with kindergarten-age to college-age students and their families has afforded me the opportunity of realizing that educational needs assessments are crucial in planning and implementation of health promotion offerings based on the developmental stage of the target population.

Mentoring of nurses who have completed certification programs prior to entering the school health specialty area has permitted me to witness novice nurses, while providing high

quality care, focusing a great deal on regulations and compliance with mandated tasks. I would make an assumption that such behavior is part of the novice transition into the school nurse role. I would also make an assumption that their certification program may have focused more on process-oriented learning objectives rather than higher-level competencies such as leadership in development and coordination of health care education programs for individuals, groups, and populations. Although, about half of the states in the nation require a school nurse credential it is unclear whether educational programs are adequately preparing nurses with the necessary skills and knowledge to practice in the health educator role.

### **Method**

A qualitative multiple-case study design was utilized to explore health education competency in school nurse certification programs. Evidence to support, describe, or develop health education competency, specifically related to school nursing, is meager, complex, and difficult to objectively gather information about. Case study methodology is used to explore such areas and supports data collection through interviews, documentation, archival records, observation, and physical artifacts. Case study design enables exploration of research questions dealing with an organization's relationships with other organizations- whether competitive or collaborative in nature (Yin, 2014). The holistic single-unit of analysis in this multiple-case design was the school nurse certification program with each case considered contextually in relation to the examination of health education competency. Rather than utilizing sampling logic, multiple-case study utilizes replication logic which involves selecting cases that predict similar results or predict contrasting results but for anticipatable reasons (Yin, 2014). Specific school nurse certification programs were the cases providing the basis for replication logic.

Evidence, facts, and conclusions for each individual case and across cases should indicate how and why a particular proposition was or was not demonstrated (Yin, 2014). Findings from a multiple-case study design endeavor to reveal lessons learned, analytic generalizations, and help build or add to theoretical concepts or principles (Yin, 2014). Analytic generalizations, may serve to either support or negate the original propositions of the study.

Faculty interviews, field notes, and examination of documents such as course descriptions, syllabi, policy manuals, course assignments, and teaching-learning activities allowed investigation of both didactic and clinical experiences afforded to nurses taking part in school nurse certification programs. This method facilitated exploration of curricular content, faculty descriptions and experiences with teaching this specialty group, and possible identification of gaps or needs in preparation of nurses for the role of health educator. According to Adelman et al. (1980) (as cited in Joyce, 2010), case study research methodology may, in some cases, demonstrate groundwork for a causal relationship or allow exploration of social situations that may be otherwise challenging to investigate.

Revelations of connections or relationships from case study research findings may result in procedural or service-oriented changes (Crowe et al., 2011). Rich descriptive data mined from faculty interviews may drive curricular revision, reveal gaps in the academic-practice connection, or spur recommendations for continuing education offerings. Yin (2014) supports this rationale by describing application of multiple case study design as means to explore the case or unit of analysis in an authentic environment. Case study design provided a method for thorough review of relationships, faculty experiences, and expectations within the school nurse certification programs.

## Relevance to the Discipline

Study participants shared information about educational preparedness and continuing education needs of today's contemporary school nurse and may themselves have found the process of completing the interview a useful exercise in reflection and contemplation. This data may assist in evaluation and development of school nurse as well as community health curricula and professional development education. NASN (2016) describes the school nurse role as dynamic and representing a vital link to the educational system. The ever-changing landscape of healthcare necessitates a need for advance practice nurses, including school nurses, to coordinate care for the multifaceted healthcare demands of the school-age population and their families. School nurses are in a position to meet these needs by providing health teaching, preventive care, and coordination of care for aggregate populations.

Attention to the changing educational needs and practices of stakeholders including nursing faculty, nursing students, practicing school nurses, the school-age population, families, communities, and healthcare providers enhances the provision of current, safe, quality, and evidence-based care. The relevance of evaluating school nurse preparedness to practice in the nurse educator role is supported by the AACN *Essentials of Master's Education in Nursing* when it describes the goal of preparing advance practice nurses to include principles of health promotion, public health, and cultural sensitivity when planning health teaching (AACN, 2011). For example, evidence-based practice, including skill and knowledge of education pedagogy and practice has become the standard used to define quality care in health care systems and is identified as an educational need for undergraduate and continuing education of school nurses.

School nursing encompasses a wide array of professional responsibilities from direct patient care to health education to advocacy on a national level. To understand current needs and

gaps in the academic-practice continuum, information was gathered about educational preparedness of school nurses via examination of certification programs and their alignment with the SOSNP as well as pedagogical practices within the classroom and clinical setting.

## CHAPTER TWO

### EVOLUTION OF THE STUDY

#### **Rationale**

The research phenomenon of study is school nurse preparation to serve in the nurse educator role. Nurses entering the school setting face many challenges including management of both chronic and acute healthcare conditions, health promotion, and education needs of individuals, families, and populations. According to the United States Department of Education National Center for Educational Statistics (2016), public school enrollment tops 50 million students in approximately 100,000 schools across the nation, representing significant opportunity for school nurses to affect the health and well-being of the nation's school-age population. To ensure adequate preparation for these roles, research needs to explore school nurses' health education competency. Health education competency is defined as the school nurse's ability to "use health promotion and teaching methods appropriate to the situation and the healthcare consumer's values, beliefs, health practices, developmental level, learning needs, readiness and ability to learn, language preference, spirituality, culture, and socioeconomic status" (ANA, 2011, p. 44). School nursing has evolved into a specialty requiring care for increasingly complex student health needs, interdisciplinary coordination of care including delegation, outcomes identification, leadership, program management, and exceptional communication skills. Appropriate academic and clinical preparation to practice in this dynamic setting is essential to provide quality care and achieve optimal outcomes. Although Praeger and Zimmerman (2009) reported that about half of the states in the nation require a school nurse credential it is unclear whether educational programs are adequately preparing nurses with the necessary skills and knowledge to practice in the health educator role.

The lack of consistency in school nurse preparation to practice coupled with ambiguity regarding perceived level of professionalism by peers, the community, and nursing leadership necessitated exploration into the advanced practice role of school nursing. Keating (2011) described concerns regarding role recognition and perception of nurses in the community, school health, home care, and hospice settings. A survey of leaders in community health by Swider et al. (2009) found that although community health nursing is considered a clinical specialty, it is not always recognized when listing advanced practice nurses. School nurses function within the community and public health domains. Uncertainty regarding the school nurse role within the community and variations in preparation to practice provide a compelling motive to evaluate preparation and competency to practice in this specialty.

Health education competency is a complex nursing skill that requires knowledge of pedagogy, identification of learning objectives, needs of the learner, and skill in evaluating outcomes. Pedagogy is described by Keating (2011) as the art, science, or profession of teaching including knowledge of instructional strategies and learning theories relevant to the developmental stage and needs of the learner. In addition to the school nurse serving in the health educator role, they also serve in management and supervisory roles when coordinating and delegating care to unlicensed personnel, leading interdisciplinary collaborative teams, and ensuring appropriate accommodations are provided for individual student needs in accordance with both federal and state regulations. Thus, the school nurse serving in the educator role touches almost every aspect of practice including teaching of students, unlicensed personnel, staff, families, administrators, community members, interdisciplinary team members, and fellow school nurses.

Findings related specifically to school nurse preparation to practice are sparse with specific information regarding preparation as a health educator even more limited. Newell (2013) is one of a select few, if not the only researcher reporting findings related to school nurse perceptions of preparedness to practice according to the SOSNP. Further research is needed to bridge the academic-practice gap, specifically school nurse preparation as a health educator. Evaluating currently practicing school nurses' ability to practice in accordance with the SOSNP may also provide insight into the adequacy and comprehensiveness of their preparation for this role. Such information may provide a better understanding of how to equip today's professional school nurses with the competencies and critical thinking necessary to face the challenges and demands of meeting the needs of current-day school-age populations, their families, and communities.

### **Historical Context**

A review of literature related to professional school nurse preparation and practice was conducted, not to support a particular hypothesis, but rather to seek what is known about this subject as described from various perspectives. The intent of a literature review in qualitative research may be described as gathering of material to deepen understanding of other perspectives (Munhall, 2012).

A literature review was completed using the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Educational Resources Information Center (ERIC), Health Watch, and Medline with an initial search term of "school nurse" from the years 2000 to 2015 yielding 4,256 results. Further refinement of search terms to "school nurse practice" and "school nurse education" with limiting years to 2010-2015, yielded 99 research-type articles. No results were yielded in searches for "school nurse standards" or "school nurse preparedness". Searches were

then changed to more general terms surrounding nurse education, preparedness to practice, readiness to practice, and transition to practice. Elimination of literature due to poor thematic fit or lack of rigor in design and methodology resulted in key articles for further review.

General themes in the literature review revolved around the challenges posed by variations in state credentialing, preparedness for practice, and continuing education. Newell (2013) and Praeger and Zimmerman (2009) related that practicing school nurses are described in various manners, from vocational or LPN to nurses holding baccalaureate, master's, doctoral, or specialized certification. Praeger and Zimmerman (2009) examined variables from states across the nation including requirements for school nurse training and credentialing. Policy and regulatory data were collected from state-specific agencies such as departments of education, boards of nursing, and departments of health. Data were then analyzed for trends. Variations in how school nurses are prepared, credentialed, and governed presents challenges in evaluating outcomes or processes on a broad level. Praeger and Zimmerman (2009) described a national school health workforce with variations of entry level requirements, nurse to student ratios, title protection or lack thereof, and continuing education requirements. For example, the Arizona Board of Nursing was the only board of nursing to authorize the school nurse title (Praeger & Zimmerman, 2009). Various other states refer to school nursing practice but do not participate in regulation or credentialing. Across the nation, departments of education are overwhelmingly overseeing titling of school nurse practice.

On a national level, school nurse preparedness to practice may be guided by the ANA and NASN SOSNP which outline competencies of school nurses, guide professional development, and “describe a competent level of nursing care as demonstrated by the critical thinking model known as the nursing process” (ANA, 2011, p. 12). Praeger and Zimmerman (2009) noted that

states lacking requirements for a baccalaureate degree or licensure as a registered nurse to practice as a school nurse are still accountable to the ANA and NASN standards of school nursing practice. Broussard and White (2013) and Newell (2013) make inferences to the standards of practice when describing areas of education to be addressed in baccalaureate nursing education such as management skills and use of evidence to support program planning and evaluation.

As described earlier, the SOSNP guide professional role development and expectations for professional role development. In describing school nurses planning to continue their education, Broussard and White (2013) surveyed 110 members of the Louisiana School Nurse Organization questioning them about learning preferences, proficiency with technology-based education, and what factors might promote or deter educational pursuits. Impediments to furthering education included cost, family commitments, and scheduling conflicts while factors such as accessibility, nearing retirement, and hesitance to engage in distance learning had little or no effect on desire to continue education at a higher level (Broussard & White, 2013). These findings were limited to Louisiana school nurses and may not be reflective of barriers and incentives to pursue higher education in larger populations. Another key area to be addressed in both baccalaureate and school nurse education is the use of evidence to guide practice. Adams and Barron (2010) conducted psychometric testing with 368 school nurses to develop and evaluate a tool to explore utilization of research-driven practice. The instrument was found to be reliable and valid for use in characterizing school nurse factors related to use of evidence-based practice. Evidence-based practice has become the standard used to define quality care in health care systems and is identified as an educational need for undergraduate nurses and continuing education of school nurses (Broussard & White, 2013; Adams & Barron, 2010; Newell, 2013).

Research is needed to understand school nurse knowledge and utilization of evidence-driven practices in educating the students, families, communities they serve.

As noted, there is limited research related specifically to school nurse readiness or transition to practice. Therefore, a review of findings on new undergraduate nurses as well as experienced nurse role changes was explored. Concerns about new nurse graduates' preparation and ability to successfully transition to the professional nurse role exist today despite considerable progress in the basic academic preparation of nurses. Wolff, Regan, Pesut, and Black (2010) utilized focus groups of recently graduated nurses, educators, and administrators to examine the meaning of new graduate nurses' readiness to practice. Proficiency in the areas of evidence-based practice, leadership, and nurse as educator were found to be basic competencies for new graduate nurses but also skills that develop to a higher level as nurses advance from novice to expert. McHugh and Lake (2010) focused on exploring whether a relationship existed between nurse academic preparation to practice and proficiency in the practice setting. It was found that composition of hospital staff, chiefly those with at least a bachelor of science in nursing degree, associated with considerably greater nurse self-reporting of a more advanced expertise level (McHugh & Lake, 2010). A common theme among these studies found that competency in various areas such as leadership, use of evidence-based practice, and nurse as educator is key in preparation of graduate nurses, eases transition to practice, and is a reflection of expertise in more experienced nurses (McHugh & Lake, 2010; Missen, McKenna, & Beauchamp, 2014; Spoelstra & Robbins, 2010; Wolff et al., 2010).

Additional literature related to transition to practice found factors including residency programs, preceptorship, and critical thinking to be elements labelled important by new graduates or nurses changing roles to advanced practice. An integrative review of 11 key articles

related to new graduate transition to practice by Missen et al. (2014) revealed that supportive transitional programs facilitate transition to practice which increases job satisfaction, a sense of belonging, confidence, and improved retention rates. In a case study utilizing self-reflection of a supervisor and a supervisee moving into an advanced practice nursing role, Sharrock, Javen, and McDonald (2013) found that those experiencing advanced practice role transition should consider the job description, available resources, and how the role is undertaken. Likewise, Spoelstra and Robbins (2010) investigated transition to advanced practice nursing through use of interviews with 24 students in a web-based role development class, similarly finding that role definition and development of core competencies including use of critical examination of evidence and collaboration are identified as key to facilitating transition to the role of advanced practice nurse. Nurse residency programs, development of core competencies, including critical thinking and use of evidence-based practice, and support of a preceptor or mentor enhance job satisfaction, retention, and confidence during role transition (Missen et al., 2014; Spoelstra & Robbins, 2010).

Mention of critical thinking skills and competency are commonplace in research investigating transition or preparedness to practice. Kaddoura (2010) examined new graduate perception of clinical simulation on critical thinking, learning, and confidence through use of semi-structured interviews with 10 new baccalaureate nurses. Simulation was reported to help new graduates to think critically and to confidently make sound clinical decisions (Kaddoura, 2010). Similarly, Myers et al. (2010) utilized focus groups with 22 new-to-practice hospital-based nurses and 19 preceptors, finding that a lack of critical thinking and inability to think holistically contributed to increased stress while frequent and positively-mannered preceptor feedback eased transition to practice for new nurse graduates. Essentially, a lack of critical

thinking skills contributes to increased stress (Kaddoura, 2010) while the integration of critical thinking skills in nursing programs both prepares nurses for practice while acknowledging that students cannot be prepared for all practice settings or situations (Myers et al., 2010). The certified school nurse is considered an advanced practice role. Adding considerations of role implementation, evaluation of available resources, development of critical thinking skills, and skill competence may be important components of a school nurse certification curriculum.

In a study designed specifically to explore school nursing readiness to practice, Newell (2013) aimed to explore how SOSNP and perceived educational preparation might direct nurse executives in acute care settings to support staff nurses in understanding school nurse responsibilities. Of the 17 SOSNP, eight of these (47%) were identified as minimally achieved upon graduation with additional education needed in the areas of: special education laws (81%), 504 accommodations (90.5%), diabetic care (76%), and delegation skills (68.6%) (Newell, 2013). Such research could have implications for continuing education and establishment of partnerships between communities, medical, or academic institutions and school health practice settings. Kruelen, Bednarz, Wehrwein, and Davis (2008) described development and implementation of a partnership between a school district and a university nursing program with intentions of enhancing school nursing services while building an educational model of undergraduate clinical nursing education in primary and secondary school settings. This Clinical Educational Partnership Model (CEPM) provides a solid foundation for mutually beneficial collaborative relationships between school nursing practice and academic programs with nursing students better understanding special health care needs of children from diverse cultures and the school nurse role. Other benefits included school nurse orientation to the academic role and promoting the nursing profession to youth (Kruelen et al., 2008).

Research paying particular attention to continuing education needs of school nurses has been addressed by Newell (2013), Kruelen et al., (2008), and further by Ramos, Fullerton, Sapien, Greenberg, and Bauer-Creegan (2014). Ramos et al. (2014) gathered information from a school nurse questionnaire in order to assess work-related educational trends within the state of New Mexico. Exploring differences in continuing education practices between rural and urban school nurses was meant to provide meaningful information about how to meet the educational needs of these groups. Findings revealed nurses from the rural setting not as likely to have obtained post-employment training in several areas such as suicide, diabetes, or asthma (Ramos et al., 2014). Literature related to school nurse education has suggested possible benefits of community-academic partnerships (Kruelem et al., 2008) and the need to question school nurses about competency areas in order to identify continuing education needs of school nurses (Kruelem et al., 2008; Newell, 2013; Ramos et al., 2014).

A comparison of available literature revealed various approaches to methodology and diversity in purpose but with parallels found in basic findings and impetus for further research. Similarities were found in several studies pointing to the importance of competency in areas of critical thinking, leadership, mentorship, and education for both new nurse graduates as well as nurses transitioning to an advanced practice role. Competency in various areas is key in preparing graduate nurses, transitioning to practice, and is a reflection of expertise in more experienced nurses (McHugh & Lake, 2010; Missen et al., 2014; Spoelstra & Robbins, 2010; Wolff et al., 2010). Most studies utilized focus groups with qualitative analysis of reported nurse perceptions about preparation and transition to practice, describing general competencies, and principles of continuing education. More specific information about how academic preparation such as pedagogy or curriculum may influence readiness to practice is sparse with

the exception of research that simulation helped new graduates to think critically and to confidently make sound clinical decisions (Kaddoura, 2010).

Researchers specifically examining school nurse practice included Newell (2013) and Kruelen et al. (2008), reporting primarily about competency in perceived preparation to practice while Ramos et al., (2014) focused on exploring school nurse educational needs and competency. Ramos et al. (2014) expressed that disparities exist between the urban and rural professional school nurse workforce in New Mexico finding that school nurses in rural areas were less likely to have received continuing education in several identified topics related to the school-age population. Kruelen et al. (2008) set out to investigate the workings of an academic-practice partnership involving a school of nursing and school nurse practice, finding benefits of role modeling of school nursing, recruitment of nursing faculty and preceptors, exposure of school nurses to the faculty role and higher education. Although Ramos et al. (2014), Newell (2013), and Kruelen et al. (2008) assessed different components of school nursing practice all touched on the same concept of academic preparation or continuing education of school nurses in meeting the needs of America's diverse school-age population.

Although research is available exploring continuing education needs of school nurses, gaps exist in the literature related to school nurse preparation to practice with Newell (2013) as the single researcher reporting findings related to school nurse perceptions of preparedness to practice according to the SOSNP. Although this study was directed at guiding nurse executives in acute care settings, this type of assessment may be useful in guiding school nurse educational program curricula as well as continuing education efforts. Research found thus far related to school nurse preparedness to practice is limited due to evaluation of outcomes or processes revolving around distinct state or regional policies and practices, making it difficult to generalize

findings to a larger population. In contrast, findings from studies such as those described here involving smaller, unique settings and populations, can serve as a basis for further research and exploration at a higher level of inquiry. Further research is needed to better understand how to equip today's professional school nurse with the competencies, education, and critical thinking necessary to face the challenges and demands of the current-day school-age population, their families, and communities.

### **Experiential Context**

Interest in examining educational competency within school nurse certification programs is based on my desire to understand, describe, and identify characteristics of the gap that I believe exists between education and practice. Despite years of experience as a clinical nurse specialist in community and school health, at times, I have found myself faced with feelings of inadequacy in not being able to fully meet the evolving needs of today's school-age population. I have found myself spending ever-increasing amounts of time functioning as a counselor, interdisciplinary coordinator of care, community educator, and managing chronic illnesses such as diabetes, hypertension, and asthma. Experience as a practicing school nurse has afforded me a personal view of the issues being faced by school-age students, their families, school personnel, communities, and fellow school nurses. Families confronting challenges of being uninsured or under-insured often turn to the school nurse for advice about when to seek medical care and how to gain access to services within the community. School nurses often counsel and teach families individually but also provide education at open school meetings, health fairs, and classrooms.

Current day school-age students are part of a generation that has been growing up in a mix of profound economic and social changes brought about by dynamic transformations in technology, social media, healthcare reform, and education. In describing the revolution taking

place in today's global, digital and information economy, Levine and Dean (2012) advise rethinking social institutions- government, schools, health care, media, and finance- which were created for a different time, for an industrial era. Rethinking and evaluating approaches to health education requires a closer look at how key health care providers, especially school nurses, are being prepared to best serve this revolutionary population in the nurse educator role.

It was my expectation that interviews with faculty teaching in school nurse certification programs and examination of supporting materials such as curricula, course descriptions, and assignments would serve to glean rich descriptive data regarding health education competency. This data may assist in evaluating current and changing education needs of contemporary school health professionals and the populations they serve. Additionally, exploration of school nurse education may assist in evaluation and development of academic curricula within school nurse certification programs. Such changes may result in nurses better prepared to support both the health and academic integrity of the aggregate school-age population, their families, and communities. I hoped to bring a sense of wonder and curiosity to the interviews and exploration of health education competency within school nurse certification programs. From here, Chapter 3 will extensively describe rationale and background for use of case study methodology, define concepts and terms, and describe characteristics of the sample, setting, procedures, rigor, and human subject considerations.

## CHAPTER THREE

### METHOD OF INQUIRY

#### **Introduction**

This chapter serves to describe case study methodology including an introduction, background, rationale, outcomes, general steps or procedures, and translation of concepts and terms. Following the detailed description of case study methodology, specifics will be given regarding the aim of the study, sample, setting, procedures, rigor, and human subject considerations.

A multiple case study design guided data collection through interviews, examination of course descriptions, curricula, and field notes. The rationale for multiple case study design is to enhance the credibility, validity, and reliability of findings (Munhall, 2012). The purpose of this study was to examine faculty-identified health education competency activities in both classroom and clinical settings within school nurse certification programs. A case study design supports data collection through interviews, observation, archival records, and field notes. Case study design enables exploration of research questions dealing with an organization's relationships with other organizations, whether competitive or collaborative in nature (Yin, 2014). Interviews with faculty, examination of course descriptions, curricula, and review of field notes from various programs were meant to illicit descriptions of current practices, beliefs, and models of how school nurses are prepared, particularly in regard to the SOSNP health teaching and promotion competency.

Disciplined nursing inquiry can be explained according to the broad world view paradigms of positivism and constructivism with methodology being tied to each approach. With constructivism, reality is not a fixed entity but rather a construction of the individuals

participating in the research (Polit & Beck, 2012). Assumptions of constructivism include interpretation or creation of findings based on the interactive processes between researcher and participants with the belief that subjectivity and value are not only inevitable but desirable as well. A constructivist paradigm is most often associated with qualitative inquiry and was incorporated as part of this multiple case study.

### **Rationale and Background**

According to Yin (2014), vital components of case study methodology include the study's questions, propositions, units of analysis, logic connecting data to the propositions, and establishing criteria for interpreting findings. Study questions served to examine or answer "who", "how", "what", or "why". Research questions are developed after reviewing the literature of studies with similar aims or populations then examining their results and recommendations for future research (Yin, 2014). A review of the literature related to school nurse educational preparation yielded data describing credentialing criteria, oversight of practice, and no evidence to support or disaffirm current practice. From this type of review, the aims of this study were designed to answer the research question: How have school nurses been prepared to act as a health educator in meeting the complex health needs of the school-age population according to the ANA/NASN School Nursing Health Education and Promotion Standards of Practice?

The second primary component of case study methodology is the composition of suppositions or propositions meant to narrow the focus of subject matter to be examined. The proposition not only promotes contemplation of applicable theoretical issues but also begins to guide where to search for relevant evidence (Yin, 2014). The scope of the question of "how" school nurses are being prepared as educators was tightened in formation of a supposition meant

to guide the exploratory process of the study: It is suspected that school nursing certification curricula and student clinical experiences may not be reflective of health education methods necessary to meet the needs of current day school nurse practice. This may be true due to the demanding, autonomous, and dynamic nature of school nursing in concert with the changing needs of students, families, communities, and healthcare providers. The more a case study contains specific questions and propositions, the more it will stay within feasible limits (Yin, 2014).

The next fundamental element of case study methodology lies in defining the unit of analysis. The unit of analysis may be a person, process, or program. In this study, school nurse preparation for the role of health educator was explored via faculty-identified competencies and examination of other data sources including course descriptions, curricula, and researcher field notes. The unit of analysis was the school nurse certification program with specific cases being the individual, single programs studied. A case study of specific programs may reveal variations in program definition and program components (Yin, 2014). Interviews with faculty from various programs across the state and examination of other mentioned data sources may brought to light similarities, differences, and challenges in preparing nurses to skillfully, competently, and mindfully educate school-age children, their families, and communities.

The final two components of case study design involve how data will be linked to the propositions and criteria for interpreting the findings. Yin (2014) related that linking data to propositions via pattern matching, explanation building, time-series analysis, logic models, and cross-case synthesis with the specific method being a direct reflection of initial study propositions. For example, time-series analysis of a process may require forethought into gathering time markers as part of the data collection plan. Explanation building is used to

analyze case study data by building an explanation about the case and is used primarily in studies seeking to “explain” a phenomenon or establish causal links about “how” or “why” something happens (Yin, 2014).

Pattern matching compares an empirically based pattern with a predicted one or other alternative predictions and may serve to support a case’s internal validity (Yin, 2014). In this study, themes were identified and matched to the SOSNP health promotion and education competency. As per Richards (2009), within-case integration occurs when data is examined in-depth within each case followed by cross-case review where similarities or differences across cases are explored with intention to create centralized descriptions. Theme identification, pattern matching, and within-case integration served to highlight shared subject matter and central ideas related to the specific aims and purpose of the study.

Cross-case synthesis in analysis of multiple case studies may serve to strengthen findings as well as provide a framework for organizing and presenting analysis. Cross-case synthesis treats each individual case study as a separate study and is similar to other forms of research syntheses in that it aggregates findings across a series of individual studies (Yin, 2014). Data can be organized and displayed in tables or diagrams, depicting and summarizing the findings from multiple case studies. This technique brings together and organizes thematic descriptions found via within-case and cross-case review.

Results from case study research can be used for policy development, change in practice, and raising consciousness of what was not known or otherwise erroneous (Munhall, 2012). Rich descriptive data mined from faculty interviews may drive curricular revision, reveal gaps in the academic-practice connection, or spur recommendations for continuing education offerings. Yin (2014) supports this rationale by describing application of multiple case study design in

explaining presumed causal links in real-life interventions that are too complex for the survey or experimental strategies. Case study design provides a method for thorough review of faculty experiences and expectations within school nurse certification programs and possibly build or add to theoretical concepts or principles.

Faculty interviews along with examination of multiple data sources such as course descriptions, curricula, and field notes permitted exploration of how school nurses are being prepared for the role of health educator. Interview questions were derived from the *School Nursing Scope and Standards of Practice* and the *Essentials of Master's Education in Nursing* documents describing health promotion and education competency. The questions and interview process were semi-structured by design as case study method of inquiry seeks to analyze emerging ideas, not patterns in responses to a fixed question (Richards, 2009).

Case study methodology elicited descriptive data focusing on the specific aims of the study: 1. Describe strategies school nurse certification programs are employing to prepare nurses to assume the role of health educator. 2. Determine if there are gaps in school nurse certification curricula in the area of health education and teaching. Joyce (2010) further described the benefits of case study research as having a history of being used to establish cause and effect in research and being recognized as having the advantage of observing effects in socially constructed contexts. Multiple-case studies utilizing interviews with faculty in school nurse certification programs, examination of course descriptions, and field notes served as a starting point for scrutinizing and describing what is known about preparation to practice for this specialty group of nurses.

## **Concepts and Terms**

Analytic generalizations- lessons learned or generalizable findings; a generalization at a conceptual level higher than that of the specific case or experiment (Yin, 2014).

Comprehensive school health education curriculum- “emphasize teaching functional health information; shaping personal values that support healthy behaviors; shaping group norms that value a healthy lifestyle” (CDC, 2015b, p. 1).

Coordinated school health program- a systematic approach schools use to meet the needs of the whole child with the goal of facilitating student achievement and success (Meeks et al., 2012).

Health education competency- “health promotion and health teaching methods appropriate to the situation and the healthcare consumer’s values, beliefs, health practices, developmental level, learning needs, readiness and ability to learn, language preference, spirituality, culture, and socioeconomic status” (ANA, 2011, p. 44).

Health literacy- “comprises skills in obtaining, understanding and acting on information about health issues in ways that promote and maintain health” (Martensson & Hensing, 2012, p. 151).

Multiple case study methodology- involves more than one case representative of study phenomenon (Munhall, 2012).

National health education standards- “written expectations for what students should know and be able to do by grades 2, 5, 8, and 12 to promote personal, family, and community health. The standards provide a framework for curriculum development and selection, instruction, and student assessment in health education” (CDC, 2015a, “Standards of Performance Indicators,” para. 1).

Needs assessment- approach to accurately identify knowledge and skill gaps within or among groups, communities, and institutions (Satre et al., 2012).

Pattern matching- as described by Trochim (1989), “compares an empirically based pattern-that is, one based on the findings from your case study- with a predicted one made before you collected your data (or other alternative predictions)” (Yin, 2014, p. 143).

Replication logic- utilized in case study methodology to choose cases; “each case must be selected so it either (a) predicts similar results (a literal replication) or (b) predicts contrasting results but for anticipatable reasons (a theoretical replication)” (Yin, 2014, p. 57).

Standards of school nursing practice- “authoritative statements of the duties that all school nurses are expected to perform competently” (ANA, 2011, p. 31).

Themes - repetitive, recurrent topics that emerge during analysis (Munhall, 2012).

Unit of analysis- used to define the “case” (Yin, 2014); school nurse certification program.

### **Sample**

The units of analysis studied were the school nursing certification programs in Pennsylvania. All 12 programs actively providing certification in school nursing were contacted by email with invitations for qualified faculty to participate in an interview with an additional request to review curricula, course descriptions, and assignments. Initially, the Pennsylvania Department of Education (PDE) web site was consulted to obtain a list of PDE-certified school nurse certification programs in PA. Each program web site was visited, revealing several programs no longer existed. Ultimately, after extensive web site searches of nursing programs across PA, 12 school nurse certification programs were found to be active. All programs are seated within colleges or universities that offer a BSN with two programs at public universities

and the other 10 in private schools. Email addresses and phone numbers for directors of the 12 nursing programs in Pennsylvania that offer school nurse certification were obtained from individual web sites or by calling the school. Email invitations were sent to the directors of these programs with a request to forward the invitation to faculty teaching or having taught within the past three years within the certification program. Faculty could also forward the email to peers who were potential candidates. Institutional review board approval from Indiana University of Pennsylvania was obtained prior to recruitment of participants. The sample consisted of faculty or nursing administrators teaching subject matter in a course contained within a certified school nurse program in Pennsylvania. The invitation contained an offer of a \$10.00 Visa brand gift card to participants who completed an interview. Gift cards were mailed to all participants as they all chose to utilize the telephone interview option.

Responses, to either accept or decline participation, occurred via email or phone. If no response was received two weeks later, a follow-up email was sent. If another week passed without either an email or phone response, a phone call was placed to the program director or designated contact person to encourage participation by faculty. Upon either an email or a phone response from potential participants indicating their willingness to take part in the study, a phone or in-person interview was scheduled. Each interview was conducted at a mutually agreed upon time and place. Confirmation of the interview date, time, and location, informed consent form, interview questions, copy of the SOSNP were emailed to the interviewee. Those participants agreeing to participate scanned and returned the signed consent forms via email. Additionally, a request for access to view or have a copy of pertinent documents such as course descriptions, course syllabi, policy manuals, curriculum sequence, reports associated with accreditation, and course or curriculum evaluation reports was included in the aforementioned communication.

This study sought a participant population from rural and urban areas, various degree programs, as well as public and private universities.

Inclusion criteria were defined to include faculty or nursing administrators currently teaching or having taught within the past three years in a certified school nurse program in Pennsylvania. Individuals who are not faculty or nurse administrators at a certified school nurse program were excluded. There were no restrictions on how long a candidate had been teaching nursing or specifically within a school nurse certification program. Participants needed to be able to read, write, and understand the English language. There was no restriction on gender.

### **Procedures**

Interviews with nursing faculty were conducted via phone in a private location and at a time convenient to the participant. Each participant was provided with a copy of the Semi-structured Interview Questions (Appendix C), a copy of Standards of Practice for School Nursing (Appendix A), and the Demographics Form (Appendix D) in advance via email. Prior to the start of each interview, the researcher reviewed the written consent form (Appendix B). The participant providing consent was given the opportunity to decline to participate at this time. All participants completed the consent form via electronically scanned, signed copies prior to the verbal conference. Interviews were audio-recorded with participant approval and lasted approximately 20 to 60 minutes.

Following introductions, the Semi-structured Interview Questions (Appendix C) guided the interaction. Interview questions were based on the *School Nursing Scope and Standards of Practice* and the *Essentials of Master's Education in Nursing* documents describing health promotion and education competency. The questions are rooted in health education, specifically the objectives of the SOSNP Health Teaching and Health Promotion competencies. They were

ordered successively to address the following: 1. Describe how your curriculum prepares the school nurse for the role of health educator. 2. What teaching/learning strategies or assignments do you use? 3. Part of the health teaching competency includes technology. Tell me how your curriculum prepares students in this area. 4. In your personal experience teaching in a school nurse certification program, share what you feel are the most critical needs in preparing nurses for practice in the school setting? 5. Tell me about any potential gaps you feel exist in the curriculum in relation to health teaching competency. Time was allowed for participants to respond to each question during the interview process and subjects were asked to clarify or expound upon areas or ideas as appropriate. Hand written notes were taken during the interview and additional probing questions asked as needed. A Visa brand gift card in the amount of \$10 was mailed after a phone interview. Additional observations and impressions made by the researcher were hand written and stored in a locked filing cabinet immediately following each interview. All materials related to each interview were organized in separate folders and stored in a locked filing cabinet. All electronic communication was stored on a password protected device. Interviews were transcribed by a private contractor. Introductory comments with any personal identifying comments or information was removed from all audio files by the researcher prior to transcription by the independent contractor.

Case study interviews and review of program materials was conducted until data saturation occurred. At the interview, each participant was asked for consent to receive follow-up phone calls, emails, and a summary draft of their interview to validate or clarify content and theme analysis findings. Sources of evidence included transcripts from interviews, course descriptions, researcher field notes and impressions, course assignments, teaching-learning activities, and other pertinent documents. Data triangulation from the described multiple sources

help address potential problems with content validity by providing multiple measures of the same phenomenon (Yin, 2014).

Participants had the option of receiving electronic access to a summary or the completed case study as submitted for completion of dissertation work at Indiana University of Pennsylvania or if published at a future date. Each subject will be contacted inquiring about their interest in receiving and reviewing the final document. Findings may serve to guide development or revision of school nurse certification curricula across the nation, impacting preparation to practice as well as quality of care provided to students, families, and communities. Efforts will be made to disseminate findings at local, state, and national conferences as well as by submission to professional nursing journals.

### **Rigor**

Quality of case study research design is commonly based on the tests of construct validity, internal validity, external validity, and reliability (Yin, 2014). Strategies and components of these quality tests utilized include: using multiple sources of evidence, establishing a chain of evidence, having key informants review drafts, using case study protocol, maintaining a database, using replication logic, pattern matching, and addressing rival explanations. These strategies which are important components of reliability and construct, internal, and external validity establish quality and rigor in case study research.

Analyzing nurse faculty identification of health education competency activities was carried out utilizing cross-case synthesis of pattern matching to identify and describe themes. Pattern matching, as described by Trochim (1989), compares an empirically based pattern with a predicted one (or with several alternative predictions) (Yin, 2014). Pattern matching was carried out by identifying and matching themes related to health education competency to the

independent variable of the SOSNP Standard 5B: Health Teaching and Health Promotion through the process of content analysis of transcribed interviews, course descriptions, and researcher field notes. Any congruence, or lack thereof, between identified themes and Standard 5B was examined to either support or negate the assumption of this multiple-case study: It is suspected that school nursing certification curriculum and student clinical experiences may not be reflective of health education practices necessary to meet the needs of current day school nurse practice.

Findings from pattern-matching analysis guided definition and testing of rival explanations. Lack of congruence between identified themes and the defining characteristics of Standard 5B may point to support of the original assumption that school nurse certification programs and clinical experiences are not preparing nurses to function in the health educator role. Alternatively, findings may point to certification programs meeting or exceeding the educational needs of future school nurses. From this analytical process, the need to explore rival explanations was determined. Addressing or rejecting rivals gives greater credence to findings (Yin, 2014). Exploration of rival explanations may influence replication logic decisions. Additional cases may have been needed, dependent upon the strength and importance of rival explanations. For example, if incongruent themes were found among cases, it may have been necessary to continue exploring additional school nurse certification programs in search of support for or elimination of rival explanations.

Certification programs were each assigned a code name such as Program 1. All sources of evidence were examined for common themes, words, concepts, and ideas through comprehensive inspection by the researcher. Word tables, note taking, and diagrams were used to compare themes across cases permitting triangulation and synthesis of findings. A return to a

search of pertinent literature was completed during analysis to validate or confirm findings that are new, different, or similar to earlier described propositions.

Munhall (2012) asserts that use of multiple sources or types of data, termed triangulation or convergence of evidence, as beneficial in providing depth to the case study while Yin (2014) relates that matching of thematic patterns can help a case study to strengthen its internal validity. Additionally, case study methods using multiple sources of evidence are rated more highly in terms of overall quality than those using single sources of information (Yin, 2014). To ensure construct validity, improve quality, and bolster rigor, drafts were reviewed by not only the primary investigator but also by key informants periodically during data analysis (Yin, 2014). These reviewers included academic advisors, peers, and those who have been subjects of the study. Triangulation of data, cross-case synthesis, and pattern matching served to improve rigor of the case study.

A chain of evidence was maintained by providing tangible links between research questions and assumptions, case study protocol, and findings. This was accomplished with strict and consistent adherence to the case study procedures and data analysis methods. Supporting documentation of all phases of the study were organized in an orderly and rational fashion. A portfolio of manuscripts, communications, and other records were maintained. This chain of evidence serves to strengthen reliability and clearly showcase links between the research question, protocol, and findings (Yin, 2014).

### **Human Subjects Considerations**

There were no known risks to participants in this study. Individual responses were recorded and transcribed. To maintain confidentiality, individuals were identified by a unique personal identifier assigned by the researcher. Certification programs were assigned an identifier

such as Program 1. All individual responses have been held in strict confidence and reported without disclosing the identity of the participant. In accordance with federal regulations, data will be maintained confidentially for three years from completion of this project in a locked file drawer or password protected computer.

### **Conclusion**

Although, about half of the states in the nation require a school nurse credential it is unclear whether educational programs are adequately preparing nurses with the necessary skills and knowledge to practice in the health educator role (Adams & Barron, 2010; ANA, 2010; Praeger & Zimmerman, 2009). The purpose of this study was to examine faculty identification of health teaching competency within school nurse certification programs. A qualitative multiple case study design utilized interviews with faculty teaching in these programs and examination of other data sources including course descriptions, curricula, and researcher field notes to glean rich descriptive data regarding health education competency.

## CHAPTER FOUR

### FINDINGS OF THE STUDY

#### **Introduction**

This chapter serves to present research findings and describe application of multiple case study methodology. A multiple case study design guided data collection through interviews, examination of course descriptions, curricula, and field notes. The purpose of this study was to examine faculty-identified health education competency in both classroom and clinical settings within school nurse certification programs. The study sample is described followed by identification, presentation, and synthesis of themes. Attention is given to discrepant data and rival explanations.

With the intent of exploring school nurse preparation to practice in the role of health educator, phone interviews were completed with eight faculty teaching or having taught at seven of Pennsylvania's 12 school nurse certification programs. Interview questions and discussion focused on identifying characteristics of curriculum, use of technology, teaching strategies and assignments, critical student-learning needs, and academic-practice gaps. Characteristics of participants and programs are presented in Table 4-1. All but one of the faculty participants were  $\geq 46$  years of age and have had at least 20 years of nursing practice with a mix of experience teaching nursing: 0-5 years (n=2), 6-10 years (n=2), 11-15 years (n=1), 16-20 years (1), and 21 or > years (n=2). All participants were female, have had school nursing experience, work full-time, and belong to at least one professional nursing organization including the National Association of School Nurses (n=5), Pennsylvania Association of School Nurses and Practitioners [(PASNSAP), (n=4)], American Nurses Association (n=2), Association of Rehabilitation Nurses (n=1), Sigma Theta Tau (n=2), Society of Pediatric Nurses (n=1), and

Nurses Christian Fellowship (1). Masters (n=4) and doctorate (n=4) were the highest degree level earned with all being in nursing (n=8). Additionally, six of the eight participants hold school nurse certification. The demographics depict a highly experienced group of participants with advanced degrees and school nursing experience, which is reflective of the national 2013 NASN Survey showing 44.4% of school nurses with a BSN, 15.1% with an AD, and over 10% holding a master's degree (Maughan & Mangena, 2014). Additionally, across the nation, 20.9% of school nurses held certification at the national level and 48.5% at the state level (Maughan & Mangena, 2014).

Table 1  
*Characteristics of Participants and Programs*

Entry Level into Practice	Bachelor's Degree (n=4)	Associates Degree (n=1)	Diploma (n=3)		
Highest Degree Earned	Masters (n=4)	Doctorate (n=4)			
Highest Degree in Nursing?	Yes (n=8)	No (n=0)			
Total Years Nursing Experience	16-20 (n=1)	20 or > (n=7)			
Total Years Teaching Nursing	0-5 (n=2)	6-10 (n=2)	11-15 (n=1)	16-20 (n=1)	21 or > (n=2)
Experience as a School Nurse	Yes (n=8)	No (n=0)			
School Nurse Certification?	Yes (n=6)	No (n=2)			
Type of Institution	Private (n=6)	Public (n=2)			
Employment Status	Full-time (n=8)				
Professional Organization Membership	Yes (n=8)	No (n=0)			
Gender	Female (n=8)	Male (n=0)			
Age	20-45 (n=1)	≥46 (n=7)			
Program Characteristics	Offer BSN (n=7)	Public (n=2)	Private (n=5)		

Of the 12 school nurse certification programs in Pennsylvania, two are housed in public institutions while the other 10 are within private organizations. Across all programs, the curricula contained class content meeting the PDE minimal requirements for content and practicum experience for credentialing as a School Nurse Educational Specialist (Appendix E). All school nurse certification programs in Pennsylvania are post-baccalaureate certification programs requiring a BSN degree and current licensure as a registered nurse within the state. Programs across the state demonstrate a variety of curricula but must demonstrate competency in the following three key areas in order to be credentialed as a school nurse and Educational Specialist: a. knowing the content b. clinical practicum performance c. professionalism (PDE, 2016). Competence must be demonstrated within these areas, including promotion of health education, recognition and response to environmental factors, managing healthcare needs of those with disabilities in least restrictive environment, knowledge of regulatory and professional issues, collaboration, communication, professionalism, and integrity (Appendix E) (PDE, 2016).

Program length, course credit requirements, class size, and format were unique and varied in meeting the PDE requirements. Students may experience a completely online, asynchronous experience or a hybrid format with a mix of web-based and in-person classroom experiences. The clinical practicum experience in all programs requires a minimum of 100 hours working with a certified school nurse in primary and secondary school settings. In meeting PDE requirements, courses in various programs included: educational psychology, nursing issues in special education, professional school nursing, physical assessment, legal issues, English language learners, and foundations of education. Credit requirements varied from 14 to 21 which affects program completion time. Programs generally required a minimum grade-point average of 3.0 for recommendation of School Nurse Educational Specialist certification from the PDE.

Reference to specific examples of curricula, course content, and pedagogy follow in description of themes.

### **Themes**

A multiple case study design guided data collection through interviews, examination of course descriptions, curricula, and field notes. The purpose of this study was to examine faculty-identified health education competency in both classroom and clinical settings within school nurse certification programs. Following are a description of themes that emerged from analysis of interview transcripts, researcher notes, course descriptions, and review of certification program curricula. Each transcript was initially reviewed by highlighting noteworthy, repeated, or significant words or ideas. The same process was completed with researcher field notes, course descriptions, curricula, and class and clinical assignments. These included, but were not limited to, terms such as advocacy, voice, autonomy, political activism, and collaboration. Noting repeated ideas or use of terms and within-case integration resulted in creation of broad categories, which eventually became the six primary themes identified: have a voice, know the law, be an advocate for students, community, profession, and self, be a leader, lack teaching experience, and collaboration. Richards (2009), described within-case integration as an in-depth examination of data within each case followed by cross-case review where similarities or differences across cases are explored with intention to create centralized descriptions.

#### **Theme One: Have a Voice**

Repeatedly, faculty echoed the value and need for school nurses to have a voice, be seen, and be heard. One faculty member described the significance of school nurses being able to competently reach a wide variety of audiences:

*“You can make yourself as busy as you want in the health office because the work never stops, but to be able to put a sign on your door that says the nurse is in a classroom says a lot...it’s important that you feel comfortable to get out and share your knowledge.”*

The school nurse having and using a voice serves to promote a sense of professionalism, leadership ability, and respect for clinical expertise. Another participant shared how school nurses may dispel myths of being simple purveyors of band-aids and be seen as a valuable resource by getting out of the health office and providing education.

*“Anyone can say, I’m too busy for that (teaching), but the fact is every minute is a teaching moment in the school system. We just have such a wealth of knowledge in our heads and on the tips of our tongues. Being members of safety and wellness committees are another way of being a health educator and being a resource to not necessarily only students, but as a resource to your whole district.”*

The participant emphasized the power of school nurses to be a resource not only for students but also to the entire district. Again, the Pennsylvania State Education Association (PSEA) school nurse job description calls for the nurse to be prepared to provide current and relevant information for school personnel in pertinent subject areas such as infectious disease policies, first aid, and safety (PSEA, 2017). Programs provide courses with assignments and objectives meant to ensure the school nurse is capable of reaching out to educate a wide variety of populations in the school setting. Examples of this can be seen in course projects or assignments where certification students are going out into the classroom to teach a developmentally appropriate health lesson or collaborating with school administrators to ensure immunization regulation compliance. Such assignments are based on course objectives calling

for the certification student to demonstrate an ability to adapt lessons to learner needs and abilities and do so within the interdisciplinary team.

One program offers a course specifically designed to meet the objective of the school nurse demonstrating proficiency in development of health teaching appropriate for students with learning problems or disabilities. Another course seeking to assist school nurses in teaching those learning the English language contains clear objectives calling for a display of competency in adapting teaching strategies for this specialized group. These courses utilize assignments requiring the school nurse certification student to seek research-based instructional strategies and rationale to support and drive modified health teaching for those with disabilities or language barriers. This is accomplished through assignments that may include discussion groups, scholarly papers, and lesson plan development. These course offerings, learning objectives, and assignments make certain school nurses are equipped with the voice and ability to meet the health education needs of the populations they serve.

Another faculty participant vividly told how school nurses can choose to stay hidden behind their office door or be a force for change and perceived as a competent, professional team member. The following is an excerpt of an initial conversation between a newly hired principal and the school nurse as described by an interviewee:

*“Principal: So you do Band-Aids and vomit? School nurse: “If that’s all you want me to do, that’s fine, but I can do so much more.”*

Adding context to this statement will help understand where the principal’s perception of school nurses originated. He previously worked in a setting where the nurse stayed in her office and did not participate in committees or seek opportunities to collaborate with teachers and administrators on health promotion or prevention programming. Faculty interviewees

consistently underscored the need for school nurses to develop and maintain professional relationships outside the nursing office. This helps others to understand the school nurse role, level of expertise, and potential contributions to student success in the school setting. Another comment by a participant supports consistently reinforcing the value of having a voice, being a competent educator and leader, and being an equal member in the conjoined school and health service system.

*“I just think that the more we give them (school nurse certification students) the information that they are a part of a school and need to be recognized...as a certified school nurse they are equal with the teacher...they do have a voice that will prepare them to be in that school setting.”*

Although nurses come to the school setting with expert knowledge in their field of practice, there is an entirely different set of standards and competencies to be learned. Certification programs often address the uniquely different standards of school nursing practice in a course designed to introduce students to the role and responsibilities of school nurses. One certification program in particular directly relates NASN school nurse based standards to expected competencies within the curriculum. Curricula across programs contained elements or principles of the school nurse standards of practice including leadership, professionalism, teaching ability, research, collaboration, quality, and care management. Various courses within the required curriculum included titles such as: educational psychology, nursing issues in special education, professional school nursing, physical assessment, legal issues, English language learners, and foundations of education. Having knowledge and being able to aptly discuss and support school nursing practice are foundations of several certification program introduction to

school nursing courses. The following statements by participants highlight the need for school nurses to be prepared to speak with a highly competent and confident voice.

*“School nurses need to develop good writing and communication skills...goes along with the idea that we are working in the field of education, so we can’t have a school nurse providing the presentation to the school and not be able to cite a reference or write a complete sentence.”*

*“Technology competency is important. We are finding that some of our school nurses are coming into the field have not had access to much technology or with limited ability to work technology. For example, it is very important that school nurses be able to prepare Power points relevant to the population.”*

In support of statements like these, program assignments included exposure to technology such as online learning systems, preparation and presentation of educational programs, and use of evidence-based resources. Additionally, reflection, group discussion, and writing, calling, or visiting legislators are all examples of assignments utilized by certification programs to help students understand and give voice to their professionalism and extensive knowledge base. Assignments and teaching strategies such as these are reflective of several overall programs’ objective for the school nurse certification student to utilize a systematic approach to problem-solving, research-based information, and effective written, verbal, and nonverbal communication skills. Faculty imparted that a great amount of credence is given to the importance of utilizing credible and evidence-based resources to support health teaching, student accommodations, and advocacy efforts. This allows the nurse to intelligently support or defend decisions and actions taken on behalf of students, community, and the nursing profession. The theme of school nurses needing to ‘have a voice’ resonates and can be felt as a common thread as discussion progresses

through ‘knowing the law’, ‘being a leader’, ‘advocacy’, dealing with ‘lack of experience teaching’, and ‘collaboration’.

### **Theme Two: Know the Law**

Another frequently mentioned topic relevant to school nurse preparation to practice revolved around knowledge of laws and policy in both education and nursing. The NASN 2015 school nurse survey revealed topics in need of review or further education as assessment of rashes, behavioral health, 504 care plans, and legal issues (Mangena & Maughan, 2015). This supports both academic and practice perspectives that knowledge of legal issues is of utmost importance in both preparation and implementation of school nurse practice. Participants provided several perspectives on how and why knowledge of legal issues is of paramount importance to school nursing.

*“The nurse has to have a clear understanding of local, state, and federal laws pertaining particularly to special education needs because that is a crucial part of what we do, you know, assessing and developing care plans to remove barriers. So if the nurse does not really understand IDEA (Individuals with Disabilities Education Act) or a 504 (plan), she is not going to be very effective in the work place.”*

*“They need a lot more information of the legal issues that are involved in school nursing because it’s quite the bees’ nest sometimes and it’s confusing because you’re working as a school nurse...working under the Nurse Practice Act, the standards for school nursing, and the nurse’s code of ethics...and you also have to work under the education laws and sometimes that line gets really blurry.”*

There may be a conflict of interest or clashing of professional ideology when nursing standards do not clearly mesh with those of educational institutions. Curricula across programs

clearly gave due respect to the school nurse understanding legal issues in the school setting. Course descriptions and assignments have the school nurse review, discuss, and develop plans of care based on providing the student with the ability to receive an education in the least restrictive environment. Faculty and researcher field notes clearly point to educating school nurse certification students about student rights to appropriate accommodations, as parents might not understand the full extent of their rights under the law. For example, a student with diabetes may benefit from a medical 504 plan that details accommodations to be made in relation to testing. The school nurse may be the force in educating parents about their right to develop and implement such a plan. The school nurse is a central figure in supporting students, families, teachers, and administration in coordination and management of medical issues in the school setting.

All curricula mentioned legal issues in the school setting. Several program and course objectives contained references to the school nurse demonstrating an understanding of laws and legal issues that affect the school setting whether related to care of students or scope of professional nursing practice. One overall program objective referred to the school nurse being able to exhibit the knowledge and skills needed to manage a comprehensive school health program. A keen understanding of legal issues is necessary for school health programs to safely and comprehensively serve students in the least restrictive environment possible. This necessitates the school nurse being able to educate families, staff, and administrators about accommodations for health-related concerns. Course assignments and clinical practicum experiences may include development of 504 medical plans or attendance at actual accommodation planning meetings while in the clinical setting. One participant describes a course devoted to legal issues.

*“The legal mandates course helps school nurses understand how the federal, state, local, and school administration rules and regulations impact their practice.”*

Additionally, school nurses are obligated to understand mandated reporting and gathering of statistics put forth the by the Pennsylvania Department of Health, Division of School Health. The PSEA (2017) job description ensures that reports required by the school district, PA Department of Health, Division of School Health, and PDE are properly prepared and forwarded. Clinical experiences with certified school nurses are often the place in a certification program where students learn firsthand about effective data collection and reporting methods. The following excerpt provides a solid example of how policy applies directly to practice.

*“School nurses need to prepare and provide a yearly immunization compliance report...so the school nurse needs to understand that (the law) to be able to enforce it and explain it to parents, staff, and administrators.”*

Not only do school nurse certification students learn about reporting as described in the previous statement, but they also need to enforce compliance of mandatory regulations, particularly those related to immunizations or exclusion for communicable diseases. Faculty described that students learn about these issues in the classroom and in the clinical setting and that is particularly important for school nurses to maintain a relationship with their PA DOH school nurse consultant. The school nurse consultant is a valuable resource for questions related to legal issues. Specifically, certification students obtain hands-on experience about immunizations in the clinical setting by observing or helping the certified school nurse track compliance, contact parents regarding changes to mandated immunizations, and complete state required reporting. Other activities involve preparation of informational flyers to be sent home to parents or development of content to update the school nurse’s health-related web page.

Coincidentally, knowledge of policy development is valuable in the school nurse's ability to practice within the parameters of both nursing and educational law. Assignments in several programs included review of policies in the clinical setting or practice writing a policy.

*Political advocacy.* Not only do school nurses need to be knowledgeable of legal issues as they relate to student care planning but participants discussed the value of political advocacy at local, state, and federal levels. Involvement in policy development locally, speaking at school board meetings, participation in professional organizations, and writing state and federal legislators were all described as strategies to strengthen school nursing political advocacy efforts.

*"The CSN (certified school nurse) really needs to be proactive and be in contact with the legislators through email or phone calls."*

*"It really keeps you up to date on what the up and coming issues are; if there are House bills coming through, they need to hear our voice and know that our voices count. We can back up our thoughts with research and what is working and what isn't working and why it is safe, the rationale. I relate this to health teaching competency because we really have to be able to present a good rationale when we're talking with a parent who is upset about the passing or the potential passing of something that affects their student with a need."*

Various programs have students learn about and take part in political advocacy by researching and writing about current legal issues, attending or presenting at a local school board meeting, and writing letters to legislators. Activities such as these help the certification student meet program and course objectives related to demonstration of knowledge and understanding of legal issues in the school setting.

*Scope and standards of practice.* Participants emphasized the value in school nurses understanding the unique scope of practice issues surrounding their situation of being the sole

health care provider in an educational setting. The following two statements reflect the importance of school nurses understanding their scope and standards of practice.

*“School nurses need to know and acknowledge what they are capable of and comfortable with...they need to understand and know their limits. There isn’t a staff development person down the hall to set up educational offerings. Need to seek out continuing education on their own.”*

*“The school nurse may be the only medical professional in the school, so they need to know what they’re talking about. There is no physician to turn to and ask a question or even another nurse at this point.”*

Both statements support the value in the clinical component of certification programs. Nurses spend a minimum of 100 hours working with a certified school nurse in elementary and secondary school settings. Clinical experiences can be eye-opening and perspective changing for nurses seeing first-hand how important knowledge of legal issues is to providing safe, quality care in the least restrictive environment. Certification students often attend medical 504 accommodation, individualized education plan, or student assistance team meetings with their co-assigned certified school nurse. Exposure to these experiences in the clinical setting provides realistic and valuable information about legal obligations of schools, right of students and their families, and the school nurse role and responsibilities. Overall, the emphasis on knowing the legal issues surrounding school health is achieved in both the classroom and clinical settings with certification students being given the experience and resources necessary to practice and advocate in a legally competent fashion.

### **Theme Three: Be an Advocate**

Having a voice and knowing the law not only contribute to components of competency as an educator but also support the role of the school nurse as an advocate for students, the community, the nursing profession, and self. Participants often referred to identifying the specific needs of the population in planning education and advocacy efforts. Many programs specifically have certification students perform a needs assessment when planning and implementing an educational program as part of a curricular thread preparing the school nurse for the role of educator, leader, and advocate. Such identification of learning needs may apply to students, families, the community, or staff. A participant clearly described how a needs assessment guides advocacy and program development.

*“Identify the needs of the population and be mindful of the fact that education role and needs of the student population varies within the school setting.”*

PSEA (2017) defined the school nurse advocacy role as assisting in interpretation of the health needs of individual children to parents and teachers and assisting families in utilizing community resources for improving the health of their children. Curricula, course descriptions, classroom content, and clinical assignments revealed a thread of information and activities related to advocacy efforts by the school nurse. Advocacy can be seen in a legal issues course description, which relates how the certified school nurse’s knowledge of legal issues is meant to protect and promote both the student’s health and ability to learn. In a nurse-as-educator course an assignment calls for the certification student to conduct a needs assessment prior to development of an educational plan. This promotes advocacy for the intended population. In another case, an advanced physical assessment course is described as an effort to ensure student advocacy by having the school nurse highly capable of detecting and treating health problems.

A participant shared thoughts about advocacy for the school nurse, underserved populations, and the profession.

*“The school nurse needs to really advocate for him or herself, showing their importance and not just sit in their office. They also need to be a bigger advocate for the community in bringing programs, especially those in the underserved populations. School nurses can be advocates for their profession by writing state legislators on important issues that impact school nursing...like the ratio (of nurses to students). “*

This statement pulls together key elements of communication, political advocacy, and programming for underserved populations in summarizing how school nurses can be advocates for school, community and professional stakeholders. Elements of advocacy can be seen across program curricula, course content, assignments, and clinical experiences as evidenced in health promotion and education of students, staff, families, and the community, political advocacy activities, and interdisciplinary collaboration efforts.

*Culture.* Faculty emphasized the importance of culture in the planning and development of educational programs. Additionally, attention to cultural needs of students and families is paramount in promoting advocacy when developing care plans within the school setting. Faculty described clinical experiences where school nurse certification students assisted a practicing certified school nurse manage care for a student with language barriers and emergence into the American culture in the school setting. School nurses collaborate with English as second language teachers, family or friends that can help with communication, and provide education to staff members on how culture may impact student behaviors or health care issues.

*“School nurses need to know the customs and traditions of the populations they serve.”*

She further explained that course content provides basic information of how to assess cultural needs and incorporate them into teaching and care plans but also stressed the importance of each school nurse needing to discover the unique cultures in their midst. Cultural considerations are incorporated into development of teaching projects and other assignments such as research of a legal issue or evaluating the learning needs of those with disabilities. Although the term culture is not overtly used in these assignments or course descriptions, reference is made to adapting care and health promotion strategies to the unique needs, characteristics, and abilities of the learner. Researcher field notes indicated impressions that culture is threaded throughout the curriculum in most certification programs. If not mentioned directly in course descriptions, culture was certainly an element of evaluating and advocating for the unique needs of students and their families.

*Physical assessment.* Physical assessment skills emerged as a relevant theme related to advocacy. Participants told how maintaining a high level of competency in physical assessment and critical thinking supports the school nurse's ability to advocate for students, staff, and communities. The highly independent nature of the school nurse role places great importance on completing comprehensive and competent physical assessments based on both known and unknown disease processes. Mention of competency in physical assessment skills surfaced during interviews, although a review of the curricula in certification programs revealed only one certification program requiring a stand-alone advanced physical assessment course. Strategies and assignments related to physical assessment included interviewing methods, assessment techniques, and critical thinking completed in both lecture and laboratory settings. Certification student nurses were provided with a safe venue to learn, possibly re-learn, and practice holistic assessment methods and skills. Clinically, all programs afforded certification students the

opportunity to perform physical assessment under the supervision of the certified school nurse. As stated previously, nurses come from a variety of clinical backgrounds upon entering school nursing practice. As the lone health care provider in the school setting, confidence and competence with assessment skills and the ability to critically appraise appropriate action to take are paramount. The faculty person described taking “flack” or resistance to the physical assessment course from students, citing reasons such as the course being inconvenient due to being held in-person, feeling intimidated, and the required number of practicum hours.

*“Physical assessment is required in the name of student advocacy.”*

A course in physical assessment skills builds the school nurse’s confidence in accurately determining the scope and severity of a problem. According to researcher field notes, physical assessment skills were most often addressed during clinical time with the certified school nurse. Honing of physical assessment ability in the safety of the classroom or under the watchful eye of a veteran certified school nurse enables skilled advocacy for students, families, staff, and communities.

#### **Theme Four: Be a Leader**

Another theme emerged describing the highly autonomous nature of school nursing roles and responsibilities. School nurses are often the sole health care provider and source of health-related information embedded in an educational setting. Demonstrating leadership ability can be seen as an essential element in support of safeguarding student, community, and school safety and healthcare needs. Faculty participants highly value and underscored the significance of leadership abilities of the school nurse. As vividly described in the following excerpts, faculty impart the importance of the school nurse developing and demonstrating leadership qualities and abilities. Interviews, assignments, and curricular threads describe leadership qualities including

strength in the ability to communicate, collaborate, know the law, advocate, and confidently express points of view.

The following quotes describe autonomy and leadership in school nurse preparation to practice:

*“We are preparing them to also have a voice, to know where to find the answers to questions....I always tell them how important it is to speak with administration, set up appointments prior to things happening, plan ahead because when you have better communication with an administrator they actually understand what you can do.”*

*“We try to make it very clear that when you are certified you are now considered a professional, so you will be working with other professional members of the school such as teachers, administrators and the school board...you need to be able to speak to nurse certification and know what you’re talking about in regards to the law or special education...or even just knowing the lingo of what’s a 504 and an IEP (individualized education plan).”*

*“When you are a certified school nurse, you have a knowledge base, skill set, and experience like no other peers in the school setting. The CSN has a responsibility of being the health educator and providing resources and meeting learning needs and meeting health needs and providing public health nursing to your constituents which can be mostly students, but it’s also faculty, families, etc.”*

*“Courses prepare you (the certified school nurse student) to ask questions, be prepared to take part in assessment, speaking confidently to administrators, and taking part in policy development and changes.”*

Clearly, faculty feel strongly about the importance of leadership being an integral part of all aspects of school nursing. Program assignments such as carrying out teaching projects,

contacting a legislator to advocate a position on legislation, or meeting with administrators to learn more about their roles are all part of a concerted effort to promote confidence in leadership abilities of school nurses. Researcher field notes supported interview discussion and course assignments as portraying leadership in a highly important light. For example, researcher impressions after several interviews and review of field notes indicated that qualities of leadership are described in every interview, whether overtly or in reference to the school nurse's ability to educate, speak intelligently about the issues, advocate, communicate, etc.

Following is an example of an interaction between a school nurse new to a building and a principal as described by a faculty member:

*“Nurse: There are 600 kids in this school. I have a \$400 budget for the year? Principal: Well Mary would just bring things from home. Nurse: Well, I'm not Mary.”*

The faculty member related this interaction as an example of how having a voice and speaking with confidence can effectively correct misconceptions about school nursing practice. The above conversation led to the nurse taking time to educate the administrator about the role and responsibilities of the school nurse, resulting in a mutually respectful relationship. Leadership strategies were commonly mentioned in several school nurse certification program curricula and course descriptions. Assignments meant to promote development of leadership abilities included coordination, planning, and implementation of a teaching project for students, staff, or the community. Researcher field notes indicated that attention to leadership activities resonated across programs, course content, and assignments. Additionally, speaking with community or political change-makers, seeking administrative support, and speaking at school meetings were mentioned in various assignments whether developing a teaching plan or advocating for policy change. For example, a specific assignment has the school nurse

certification student explore grant opportunities relevant to their particular school population needs. Seeking support from school administrators and writing the grant help meet objectives of having the student demonstrate competency in leadership, use of evidence-based practices, and an ability to effectively collaborate with other team members.

*“They (school nurses) need to learn how to solve problems based on evidence; for example, if need to present to school board, they need to know how to collect the data and present the data.”*

Overall, leadership ability surfaced as a major factor in school nurse preparation to practice not only in the health educator role, but also in enhancing advocacy efforts, communication, and collaboration.

#### **Theme Five: Lack of Teaching Experience**

Considering that all certification programs incorporate teaching into the curriculum, it is not surprising that a theme emerged describing teaching experience, or lack thereof. Often, faculty described students highly skilled in incidental teaching that occurs on a daily basis during student and parent interactions but not confident or experienced in more formalized program planning for larger groups.

*“Part of being certified is you should be able to go into the classroom independently and teach a health lesson and they’re (school nurse certification students) not prepared to do it or they’ve never done any sort of actual teaching except as a nurse. No experience with planning lessons for how to get through to 30 people at one time in a class.”*

The sentiment that school nurse certification students often lack training in how to plan, conduct, and evaluate teaching projects appeared in most every interview with faculty. Researcher field notes related similar impressions including: “they lack experience teaching, fear

going into classroom, simply haven't been taught how to teach". However, there is strong evidence within curricula, course descriptions, and assignments emphasizing pedagogy, practice teaching, and evaluation. All programs require students to determine an educational need within their school setting, develop an evidence-based teaching plan, implement, and evaluate the teaching project. Evaluation included not only effectiveness of the teaching project for the intended audience but also self-reflection on the individual's strengths and weaknesses throughout the process. Additionally, principles of education shine through in special education and psychology courses with attention given to how teaching strategies may need to be modified or tailored to meet very individualized student needs.

In describing minimal competency in the area of knowledge attainment, PDE (2016) expects school nurses to be capable of imparting education in pertinent areas. These may include subject matter related to infectious disease, cultural diversity, psychology, and disease prevention (PDE, 2016). Several certification programs weave these topic areas into courses such as educational psychology or special education courses. One special education course is described as examining the psychological aspects of individuals with disabilities while psychology classes explore lifespan or more specifically, child and adolescent development. This supports the notion that school nurses need to be prepared to teach and do so competently and confidently.

Following are excerpts describing various strategies and course content designed to familiarize school nurse certification students with the principles of educational program planning, development, and implementation.

*“School health theory looks at health status of the general population of children and personnel in the school setting with emphasis placed on assessment and resolution of health problems that are common in those populations.”*

*Another faculty member shared that, “They do a modified geographic community assessment of a school to identify a learning need, then create and cultivate a format for discussion and educational presentation that could be either adult or peer led. This decision is based on evidence identifying which approach would be best. Understand foundational principles of public health concepts.”*

*“Special education course focuses on meeting needs of students with different disabilities in regular and special education classrooms. Also, helps prepare for role in educating the parents and the students on staying as healthy as possible and how to help their child.”*

Course content related to development of teaching programs is provided through use of discussion boards, web conferences, group work, scholarly papers, writing policy, and presentation of work to peers. Assignment topics include health promotion, illness prevention, psychological issues, accommodations and adaptations, and partnerships with families. Researcher field notes suggest that imparting the ability to plan and develop teaching programs was integrated across curricula and course content. School nurse certification students are repeatedly given information about health education competency in classroom and clinical experiences.

Faculty described making assignments pragmatic and able to be translated directly to practice settings and situations.

*“Case studies and scholarly papers stimulate critical thinking and decision making...applying their theory to the practice.”*

*“They need to do a needs assessment, create a lesson plan, be prepared to come across as professional.”*

Additionally, faculty described an important piece of educational planning and development involving the use and identification of credible and reliable sources.

*“Focus on identifying credible and reliable sources and not so much on mastering a specific technology skill set.”*

Assignments and course content are based in evidence from relevant, reliable, and credible sources. Faculty related that teaching to specific technologies was not highly relevant but having students understand the principles of how to find and utilize evidence-based, scholarly work is critical in development of sound teaching projects.

Overall, nurses entering school nursing certification programs do so initially unprepared for the challenges of teaching in a more organized and formal manner despite having prior experience with incidental patient teaching in one or more specialty areas. Faculty participants describe the angst surrounding this transition and how curriculum, pedagogy, and sensitivity to the issue are designed to lessen anxiety and build competence and confidence with teaching.

### **Theme Six: Collaboration**

The concept of collaboration was a recurring theme described as a means to support and build upon lack of teaching experience, leadership, advocacy, and having a voice. Collaboration pertains to relationships with other school nurses, students, families, community agencies, teachers, administrators, physicians, and more. The value of collaboration rises out of the characteristic singular presence of the school nurse in an academic setting. PDE school nursing certification requirements clearly call for collaboration with other professionals (PDE, 2016).

In discussion of prior themes, faculty have noted the challenges faced by working in the highly autonomous school setting. These may include learning to understand the differences and boundaries of both educational and nursing law, working within one’s scope of practice, and

knowing when, where, how, and who to ask for guidance. One faculty participant portrayed entry into school nursing as a “rude awakening” for some, especially in relation to working with limited resources. This issue is addressed in certification programs by way of discussion about the value in establishing collaborative relationships with school administrators, other school nurses, and charitable community organizations. This is done through use of case studies and group discussions either in class or through an online learning platform.

Faculty impart the importance of maintaining relationships with other school nurses as a means of support and a resource for advice and guidance:

*“We’re all attached at the hip...we can’t do our jobs without each other.”*

*Another participant suggested the need to, “Reach out and establish a network with other school nurses so they have resource people to see how things are done differently.”*

*“School nurses need a sounding board to say, I have this problem and I’m not sure how to go about tackling it. What do you think?”*

Faculty participants reported networking with other school nurses and medical professionals as a key factor in easing transition and supporting one another. Faculty routinely encouraged certification students to network and establish relationships with fellow school nurses and not limit it to nurses in their home district. They made clear the importance of making connections with local, state, and national peers via attendance at association meetings, conferences, continuing education offerings, and through online sources such as professional blogs and webinars.

Curricula, course descriptions, and assignments did not contain formal mention of collaborative activities but did exist in the context of being paired with a certified school nurse for clinical experiences or working with teachers or parents to prepare a teaching program.

Overall program and course descriptions contained objectives calling for collaboration with other school professionals and parents to meet the health, developmental, and educational needs of students. Another program objective called for collaboration with members of the community in delivery of health and social services. Yet another program objective outlined the need for knowledge of community health systems and resources for the school nurse to function as a community liaison.

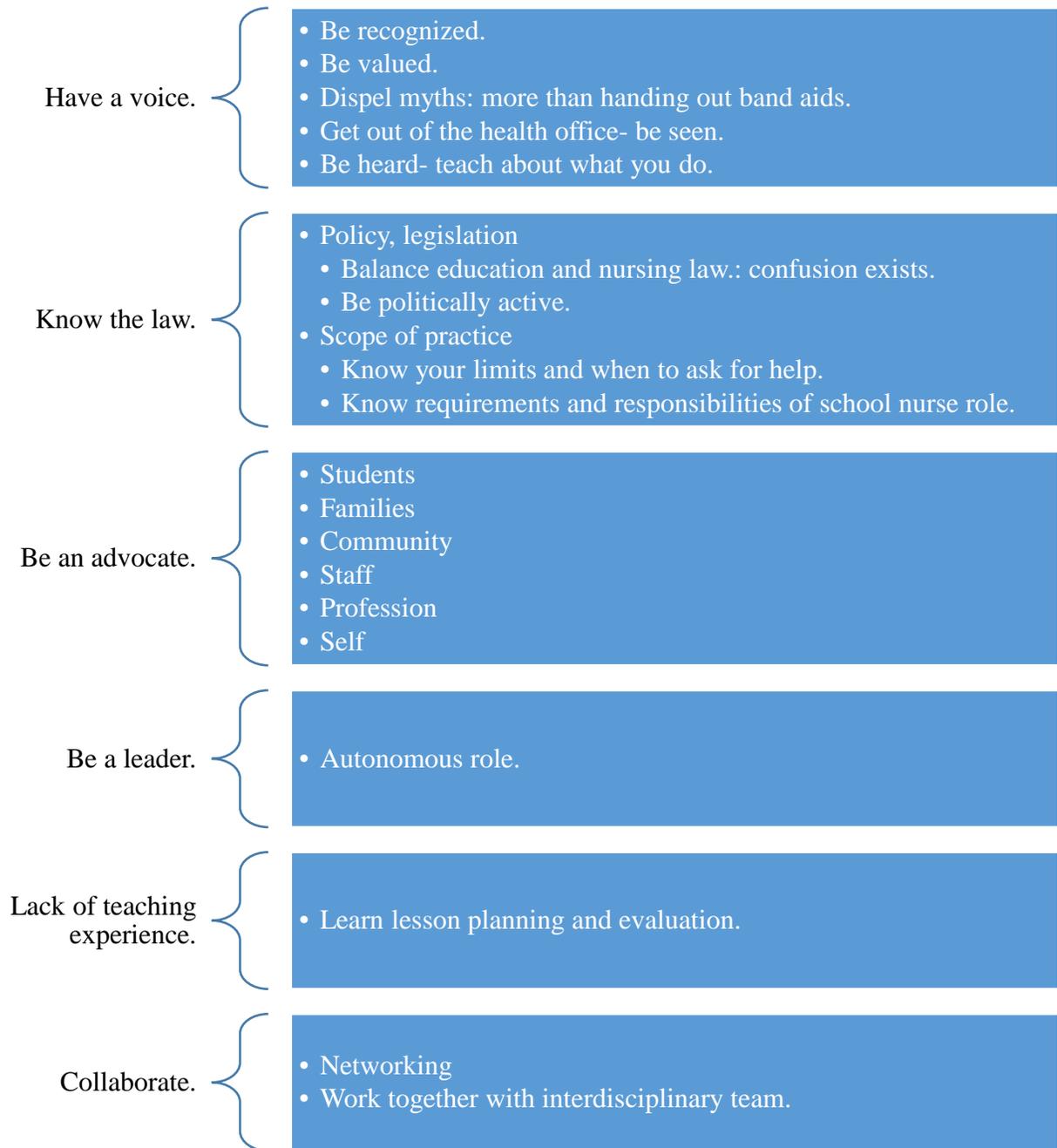
Kruelen et al. (2008) made specific mention of academic or community practice partnerships with school nurses. This study noted the benefits of role modeling of school nursing, recruitment of nursing faculty and preceptors, exposure of school nurses to the faculty role and higher education. Faculty participants did not explicitly mention such partnerships when referring to collaboration, preparation to practice, or in reference to health education competency. Faculty often maintained supportive relationships by keeping in contact with school nurse certification students after program completion, acting as an informal mentor, resource, and/or partner. The relationship benefits faculty as well by allowing them to seek feedback regarding current nursing practice. This is beneficial for curriculum and course review. In essence, the informal academic-practice partnership between faculty and school nurses is mutually beneficial.

*“It’s very important for them to be looked at as part of the team and not just an afterthought when there is an emergency.”*

Collaboration also applies to the interdisciplinary team members including teachers, administrators, school psychologists, social workers, and physical, speech, and occupational therapists. Most every program contains a course generally named professional school nursing and one course specifically addressed the need for school nurses to work both collaboratively

within the school, community, and across disciplines to effectively manage school health services. Earlier when discussing the value of nurses having a voice, being leaders, knowing the law, and being advocates for various groups, the merits of collaboration and networking were evident. For example, school nurses attending a 504 medical plan meeting need to understand legal implications, take a lead in the accommodations process, and to appropriately educate everyone involved about medical conditions and plans of care. Certification students have the opportunity to participate in this process during practicum hours by attending these care planning meetings, providing input, and debriefing with the certified school nurse and faculty. The PSEA job description outlines the school nurse role in facilitating collaborative relationships both within the school and in the community as this creates consistency in delivery of services for students and their families (PSEA, 2017).

School nurses working in silos, often the sole health care provider responsible for hundreds or thousands of students and faculty, necessitates collaboration and networking to ensure provision of competent, coordinated care as well as precious support for school nurse professionals. The collaboration theme is tied to various other findings in examining school nurse health education competency and preparation to practice. It can be seen in having a voice, being a leader, knowing the law, advocacy, and teaching experience as evidenced by the example of the school nurse planning and coordinating care for students to function and be educated in the least restrictive environment.



*Figure 1.* Themes related to school nurse preparation to practice.

## **Rival Explanations**

Triangulation of data by examination of rival explanations is an analytic strategy necessary to test and define competing hypotheses, descriptive frameworks or rival conditions (Yin, 2014). Discussion of findings shows nurse faculty recognizing and responding to issues related to educational preparation of school nurses by emphasizing the need for students to be competent in development and implementation of both educational and informative programs with academic preparation geared toward school nurses capable of coordination, advocacy, and leadership abilities. Findings revealed descriptions of curriculum development in response to PDE and PA State Board of Nursing requirements and recommendations. Only two out of eight faculty participants specifically mentioned the standards of school nursing practice as guiding curriculum development for school nurse certification programs. The original inquiry and research question were based in the idea that curriculum composition follows and is in the context of the SOSNP.

Might it be possible that faculty are initiating curricular and pedagogical changes in response to PDE and state boards of nursing requirements and recommendations rather than the SOSNP and the dynamic nature of the changing needs of the school-age population and the nurses who serve them? This may be an area requiring further examination by both PDE, professional nursing bodies such as the state board of nursing, NASN, and Pennsylvania Association of School Nurses and Practitioners (PASNAP). Collaboration between these bodies will ensure school nurse certification programs are designed to meet the needs of today's students, families, and communities in accordance with both educational and school nursing standards.

Faculty repeatedly described school nurse certification students entering this specialized field with little experience or a lack of confidence in their ability to plan, implement, and evaluate more formalized health teaching projects. It is often veteran nurses in other areas moving into a novice role as a school nurse. Course and program objectives and descriptions, faculty interview comments, and researcher field notes and reflections noted heavy attention to preparing certification students for the health educator role. This is done through lecture, hands-on development, implementation, and evaluation of teaching projects, and clinical experiences with a co-assigned certified school nurse.

In summary, themes of having a voice, knowing the law, advocacy, leadership, preparation to teach, collaboration, culture, and physical assessment all point to issues of preparing skilled clinicians for transition to an advanced practice, autonomous role as a school nurse. Speaking about the unique qualities and benefits of having school nursing professionals highly attuned and capable of meeting the needs of today's students, families, and communities is invaluable for health prevention and promotion. In Chapter Five, reflections will be made about the overall relevance, strengths, and weaknesses of the case study followed by thoughtful consideration of implications for practice related to each theme.

## CHAPTER FIVE

### REFLECTIONS ON THE FINDINGS

#### **Introduction**

This qualitative multiple case study explored faculty-identified health education competency in both classroom and clinical settings within school nurse certification programs in Pennsylvania. The SOSNP related to health education and promotion describe health education competency as being able to synthesize empirical evidence and theories when designing health education information and programs, conducting comparative health teaching and counseling, considering comparative-effectiveness research recommendations, and participating in evaluation of health curricula (ANA, 2011). Interviews and discussion with eight faculty teaching or having taught in a school nurse certification program and examination of course descriptions, assignments, curriculum, and researcher field notes, resulted in descriptions of curricula that emphasized evidence-based development and evaluation of health teaching by the school nurse. This is consistent with key components of the SOSNP health education competency which describes the school nurse as needing to be competent in employing strategies to promote health and a safe environment, especially regarding health education (Appendix A). Themes of having a voice, knowing the law, leadership, advocacy, collaboration, and lack of teaching experience were identified. Each theme will be discussed in context of relevance to the study and implications for practice.

Prior literature lacked information directly related to exploration of school nurse preparation to practice but focused on the importance of competency in areas of critical thinking, leadership, mentorship, and education for both new nurse graduates as well as nurses transitioning to an advanced practice role. Faculty participants consistently described the need

for both novice and veteran school nurse certification program students to seek out mentorship and networking opportunities to support one another in problem-solving, critical thinking, and relieve the isolation of working as the sole medical professional embedded within an educational setting. Participants also pointed to the significance of nurses entering the highly autonomous field of school nursing becoming competent in leadership skills as this gives “a voice” to school nursing as a profession and for the individual. Leadership skills were also referenced in relation to advocacy and development and implementation of educational activities. A balanced combination of leadership and assertiveness helps prepare the school nurse to speak and educate students, families, communities, and administrators in an effective, intelligent, and confident manner.

### **Implications and Relevance of the Study**

#### **Strengths**

This multiple case study examined identification of school nurse preparation to practice as a health educator was able to reach faculty in seven of Pennsylvania’s 12 school nurse certification programs (58%). Faculty participants were highly experienced in education, school nursing, and in general nursing practice, resulting in decidedly credible information.

Additionally, all certification programs in Pennsylvania adhere to the same PDE-required essential components (Appendix E), permitting a consistent baseline of expected standards from which the school nurse specialist certificate is granted.

Quality and strength of case study results can be measured through evaluation of various types of validity and reliability. Judging the quality of case study methodology involves examination of four design tests including construct validity, internal validity, external validity, and reliability (Yin, 2014). In support of establishing construct validity, multiple sources of

evidence have been used in data collection and analysis. These include faculty interviews, researcher field notes, course descriptions, and program curricula. Along with this, a clear chain of evidence was maintained and documented in the course of describing case study methodology, with particular attention to where, how, and when information was obtained and stored.

Triangulation of data from multiple sources results in case study findings supported by more than a single source of evidence and helps to strengthen construct validity (Yin, 2014). This adds to a more full-bodied analysis and strengthens rigor. Convergence of evidence from sources including semi-structured interviews with faculty, course descriptions, researcher field notes, and curricula worked to corroborate and build theme development.

With case study methodology, internal validity primarily applies to explanatory or causal studies (Yin, 2014). This case study was purely exploratory and has not sought any explanatory or causal relationships although tactics such as cross-case synthesis and addressing rival explanations have been applied during presentation of findings. Utilization of cross-case synthesis involves examination of multiple cases with benefits of providing more robust and rich analysis (Yin, 2014). Interviews were conducted with eight faculty from seven of the 12 school nurse certification programs in Pennsylvania. This is a strong representation of both public and private institutions from both rural and urban settings across the state. Examination and synthesis of themes evolved across certification programs, enhancing validity and adding credence to findings.

Operationalizing and describing specific steps in the case study process strengthen reliability, which is meant to minimize errors and biases in a study (Yin, 2014). Case study protocol was followed with steps in methodology related to data collection and analysis that were clearly operationalized so that a later investigator could conduct this same case study. For

example, in recruiting participants, characteristics for inclusion or exclusion in the study were clearly defined. Steps for contacting representatives from programs followed a prescribed process where an initial email was sent, followed by a second email if no response to the first, and then a phone call if needed. Steps for maintaining anonymity and the process for data collection and analysis were clearly structured and followed. This multiple case study demonstrates several quality characteristics in the form of strong construct validity, internal validity, and reliability.

### **Limitations**

As described earlier, key propositions addressing aspects of the research question regarding school nurse preparation to function in the educator role hypothesized that school nursing certification curricula and student clinical experiences may not be reflective of health education practices necessary to meet the needs of current day school nurse practice. A limitation to completely addressing this proposition was that the case study focused on faculty perspective and anecdotal feedback from their experience with school nurse certification students. This can be seen as a threat to external validity and the ability to make generalizations to larger populations (Yin, 2014). Exploration of school nurse preparation to practice with inclusion of actively practicing school nurses and even students currently enrolled in a certification program would provide a more detailed narrative about present-day school nurse practice needs, particularly preparation to function in the role of health educator.

The multiple case study approach is very appropriate for exploration of a topic with a limited research base and this study has served as a starting point for examination of the school nurse role as health educator. It is that, a starting point. The study was limited by considering only those faculty teaching in school nurse certification programs in Pennsylvania. The choice to

recruit such a distinct set of participants was an attempt to circumvent the wide variety of credentialing of school nurses across the nation. Focusing on school nurse certification programs in Pennsylvania that are consistently organized and meet standardized PDE requirements allowed exploration of preparation to practice in a more organized and coherent manner. General themes in the literature review revolved around the challenges posed by variations in state credentialing, preparedness for practice, and continuing education. Praeger and Zimmerman (2009) examined these variables from states across the nation, including: authorization for providers of school health services, criteria for becoming a school nurse, authorization to title school nurses, title protection for school nursing, mandates for school nursing, and requirements for continuing practice as a school nurse. Beginning conversations with faculty in PDE-approved programs allowed for a view into preparation of school nurses originating in structured, curriculum-driven programs. Conversely, this may be restrictive in applying findings to a wider, larger population.

### **Recommendations and Implications**

Prior to examining each theme and making recommendations, it was necessary to address wide-ranging concerns that impact the proposition that school nurse certification programs might not be meeting the needs of current day school nurses. One of the interview questions opened discussion to perceived barriers or gaps that may exist among curricula, course content, or clinical experiences and the demands being placed on present-day school nurse practice. Participants described possible disparities in preparing school nurses to practice as being outdated resources, too much information to cover in allotted amount of time, and what one faculty member referred to as “fast times”. She described it this way, “The role of the certified school nurse is ever-evolving and a lag time between what’s going on at the ground level and

adjustment of curriculum may not be meeting their needs.” This may be true due to the demanding, autonomous, and dynamic nature of school nursing as demonstrated by the changing needs of students, families, communities, and healthcare providers. This supports the conjecture that school nurse certification programs might not be meeting needs of current day practice due to lag times in adjusting program curriculum, content, and experiences.

Curricular changes are often time-consuming and may not be implemented until long after a gap in the academic-practice dynamic is detected and acted upon. One way this problem may be addressed is by routinely surveying practicing school nurses to assess needs relevant to current day school health. The needs assessment may drive changes in school nurse certification teaching strategies, class assignments, textbooks, resources, and clinical experiences, quite possibly without the need for significant curricular changes. Beauvais et al. (2017) described a similar process of gap analysis in an attempt to evaluate differences between nursing education and practice where curricular development is made in response to clinical advancements. Use of updated, relevant resources and focusing assignments on current-day practice needs will better serve to curtail overwhelming amounts of content and prepare nurses for the challenges of autonomous school nurse practice. All of these may be implemented in a timely manner while remaining true to an already established curriculum.

Following are descriptions of emergent themes with evidence-based support of implications and recommendations for professional nursing practice. It is noted that thematic content tends to overlap or intersect at times. For example, ‘having a voice’ spills over into leadership, advocacy, and political advocacy. This results in implications for nursing practice being applicable across several themes.

**Theme one: Have a voice.** Encouragement of the school nurse to have a voice, be seen, and be heard was a theme resonating across all cases. The quality of someone, particularly a school nurse, being able to confidently stand before others to speak intelligently and thoughtfully supports subsequent themes of knowing the law, advocacy, leadership, teaching acumen, and collaboration. Although school nurses have contact with students on a daily basis, getting out of the health office can be a challenge due to several factors including lack of time, no relief to help cover needs of students when gone from the office, and insecurity from lack of experience with teaching or public speaking. Well-rounded training in program planning, implementation, and evaluation along with leadership training would go far in cultivating the strengths and characteristics necessary to function as an educator in a competent, confident, and comfortable manner. Creating curricular threads related to leadership and education might serve to strengthen the school nurse student's ability and confidence with public speaking, teaching, and management activities.

Faculty described school nurses needing to 'get out of their offices' and to function as an equal part of the professional team. The essence of having a voice can be seen when speaking of other themes of advocacy, leadership, teaching experience, knowing the law, and collaboration. Similar suggestions of having school nurses seek collaborative relationships, stay abreast of current nursing and political issues, and seek training in program planning and leadership will be seen throughout the recommendations narrative.

An earlier interview excerpt described an example of an all-too often ill-perceived perception of the school nurse's role as minimal and less demanding than other professional nurse roles. Perceptions exist that school nurses never leave their office and spend the day providing basic first aid. This could be attributed to the isolated nature of school nurses working

in an academic setting with little or limited exposure to other health care providers, school staff, or parents during a routine day. Individual responsibilities and roles may be glimpsed by some, but in general, the wide array of duties such as triage, medication administration, tube feedings, tracheostomy care, care of emergency situations, development of 504 medical plans, participation in wellness committees, teaching classroom lessons, budgeting, and caring for staff go unnoticed or recognized. A return to the literature supports similar misconstrued perceptions. A survey of leaders in community health by Swider et al. (2009) found that although community health nursing is considered a clinical specialty, it is not always recognized. School nurses function within the community and public health domains. As mentioned earlier in the literature review, there are wide variations in supervision of school nurse credentialing and titling across the nation, causing confusion as to how a school nurse is prepared for practice in Pennsylvania versus Arkansas, for example. Credentialing and continuing education requirements vary greatly across the country with 66% of states having school nurse title protection while 41% of states lack any continuing education requirements for practice (Praeger & Zimmerman, 2009). Essentially, this means that in states with title protection, only individuals meeting the criteria set by the state authorizing organization can call themselves school nurse in that state.

This lack of consistency in credentialing adds to confusion and misperceptions about how school nurses are prepared and exactly what their role entails. Uncertainty regarding the school nurse role within the community and variations in preparation to practice provide a compelling motivation to evaluate this specialty. Strategies for school nurses to help clear up misconceptions may include representation on school or community wellness, safety, and advocacy committees or work groups. Additionally, school nurses might ask their administrator for routine meetings to discuss and share information about current trends and needs related to

school health issues. Certification programs could include similar experiences within school nurse practicum, nurse as educator courses, or presentation of health education or advocacy topics within the classroom, to school administrators, or community groups. This could serve as a starting point for the nurse, as student or practicing clinician, to gain confidence and comfort with using his or her voice.

From here, the issue of preparation to practice and the transition process from expert clinician to novice school nurse may help clarify how to lessen this gap between academic preparation and practice behavior. Literature has explored nurse perceptions and challenges when faced with movement from work as a veteran clinician to a new advanced practice role in education or another nursing specialty area. In a case study utilizing self-reflection of a supervisor and a supervisee moving into an advanced practice nursing role, Sharrock et al. (2013) found that those experiencing advanced practice role transition should consider the job description, available resources, and how the role is undertaken. Likewise, Spoelstra and Robbins (2010) investigated transition to advanced practice nursing through use of interviews with 24 students in a web-based role development class. Similarly, they found that role definition and development of core competencies including use of critical examination of evidence and collaboration were identified as key to facilitating transition to the role of advanced practice nurse. Although these findings have not been specifically applied to the role of certified school nurse, they parallel the transition to a highly autonomous role. Certification students and practicing school nurses can use this information to be sure they are well informed of role definition, able to link the SOSNP to practice, and to reflect on how to effectively express this information to others. For example, the school nurse may plan weekly meetings with administration where she gives pragmatic examples of how the professional standards of practice

improve student health and well-being with health teaching as a prime example. Likewise, the certification student may be asked to prepare a similar presentation regarding the school nurse role or a school health related topic during the clinical practicum experience.

School nurse standards and PDE requirements for certification demand competencies in health education knowledge and dissemination, professionalism, clinical competency, collaboration, and use of reliable evidence-based sources. The PSEA job description and PDE requirements for school nurse certification support the need for nurses transitioning from the role of expert clinician in a specialty practice area such as orthopedics for example, to be prepared for the newfound responsibilities needed in the school setting. The PDE *Certification and Staffing Policy Guidelines for Educational Specialist Code 1890* describes the expectation of highly qualified school nurses. Some characteristics include expertise in assessment, communication, management of students with disabilities, and competence in assessment of safety and the environment (PDE, 2014).

Although nurses come to the school setting with expert knowledge in their field of practice, there is an entirely different set of standards and competencies to be learned. Certification programs may utilize assignments and activities such as development of a presentation or paper outlining the various roles and responsibilities of the school nurse as outlined in the PSEA job description and the SOSNP. Faculty participants described the need for school nurses to be prepared to speak with a highly competent and confident voice as both educators and leaders. The theme of having a voice is supported in the health teaching and promotion SOSNP that describes the school nurse as being competent in providing education, particularly in the areas of health promotion and a secure environment (ANA, 2011).

**Theme two: Know the law.** Building upon having a voice, participants specifically addressed the general theme of the need to understand nursing and educational law by relating that there is a need for “learning the language (of educational law)” and “it’s a fine line to balance between being a healthcare provider with a license and working in the educational world.” The NASN 2015 school nurse survey revealed topics in need of review or further education as assessment of rashes, behavioral health, 504 care plans, and legal issues (Mangena & Maughan, 2015). Additionally, all participating certification programs contained legal aspects of school nursing as a curricular component and in assignments such as topic papers, writing legislators, and class presentations. Earlier in the literature review, Newell (2013) described school nurses needing additional education in areas including special education laws, 504 accommodations, and delegation skills. This supports both academic and practice perspectives that knowledge of legal issues is of utmost importance in both preparation and implementation of school nurse practice.

Participants and supporting documents such as curricula, course descriptions, and assignments across programs supported the importance of being knowledgeable about the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act (Section 504), individualized health and education plans, and delegation as a few examples of policies and laws that affect students, healthcare providers, and educators. Understanding and being able to speak competently and intelligently about legal issues is paramount to student advocacy, professionalism, and effectively educating families, the community, peers, and administrators on these topics.

School nurses are obligated to address not only educational law but also remain true to their state nurse practice act and standards of school nursing practice. The PDE school nurse

requirements very clearly outline policy, moral and professional issues guiding the delivery of school health services in Pennsylvania schools (PDE, 2016). These include “Federal, state and local laws and regulations, Pennsylvania State Professional Nurse Law, Pennsylvania school code and regulations, American Nursing Association/National Association of School Nurses code of ethics, privacy and confidentiality, and child and parental rights” (PDE, 2016, Knowing the content, section 1.D., para. 2).

All participants have strongly supported and described legal content present in their certification programs. It was often emphasized that knowledge of legal issues is not only important simply because it is required by the PDE but because it is crucial to school nurse effectiveness in providing safe, quality, and organized care. This was also reflective in courses dedicated to legal issues and assignments such as scholarly papers or presentations designed to promote knowledge and understanding of school health legal issues. Additionally, understanding of educational and nursing law enhances the school nurses and certification student’s ability to advocate for school-age students by speaking and educating administrators, teachers, school boards, and the community in a highly professional manner.

Faculty often described certification students expressing confusion or difficulty in determining how to balance educational and nursing law in a school nursing practice setting. There are conflicts at times with things such as delegation and understanding of nursing responsibilities that may differ from or not be fully understood by school staff and administrators. This represents a case where the certified school nurse needs to competently and confidently be able to educate administrators and others on nursing law. For example, nurses may be asked to delegate assessment and medication administration to unlicensed school personnel. A participant described a situation similar to this where the nurse was directed to

instruct unlicensed personnel, including teachers and administrators, in the assessment, preparation, and administration of an injectable medication. The nurse, prepared with the state nurse practice act, the school code (educational law), standards of practice, and support from the local education association representing teaching staff, made the case for not only how such a mandate jeopardizes student safety but also goes against both nursing and education codes of law. The nurse prevailed in developing a safe, legally sound plan of care that was supported by the family, administrators, teachers, and nursing staff. This is an example of how certified school nurses may utilize their specialty expertise, leadership, and ability to effectively educate others in advocating for safe provision of healthcare in the school setting. Certification students could benefit from case study work and discussion describing a similar incident which would promote knowledge of both educational and nursing law, critical appraisal of safety concerns, advocacy, and leadership.

Multi-partisan support for school nurse mastery of school health legal issues is strong and evident in PDE school nurse certification requirements, PSEA school nurse job description, the SOSNP, and the *National Association of School Nurses 2015 Survey*. This survey reported that knowledge of legal issues and 504 care plans was among top educational needs for school nurses (Mangena & Maughan, 2015). Newell (2013) supported this in findings that knowledge of special education laws and 504 accommodation plans are among the SOSNP most in need of further education. School nurse knowledge of legal issues is described as a highly important issue not only in preparation to practice as a new school nurse but also in continuing education for more veteran nurses.

All certification programs contained content specifically aimed at understanding educational laws and how they affect practice. For example, nurses learn about how and when a

Section 504 medical plan is necessary and how to take an active part in ensuring appropriate accommodations are made. Nurses may not be invited to Section 504 planning meetings so it is crucial that they “have a voice” and be vocal about their expertise and ability to take part in planning and appropriating for the health care needs of students. School nurses may benefit from scheduling routine meetings with administrators to discuss health care needs of students and be sure they understand the role nursing plays in coordination, implementation, and evaluation of care. Certification programs can prepare students for these activities by having similar requirements within the practicum experience. For example, there could be case study discussion revolving around a student in need of 504 medical accommodations, with certification students asked to develop a plan of care with evidence-based rationale and proposal for how information would be disseminated to school personnel.

Political advocacy goes hand-in-hand with having a voice. School nurses can take their unique position of being knowledgeable of both nursing and educational law outside the walls of the nurse’s office to speak and advocate for stakeholders which may include students, families, and the community. School nurses often develop long-lasting trusted relationships with students, families, staff, and administrators. Couple this trust with knowledge and an ability to effectively communicate and school nurses are in a powerful position to promote and affect change. Examination of curricula and assignments revealed activities designed to promote and support the student’s understanding and active participation in political advocacy efforts. These activities included researching school health legislative issues, writing a persuasive letter to a legislator, and scholarly paper writing on a current legal issue. Involvement in policy development, speaking at school board meetings, participation in professional organizations, and

writing state and federal legislators were all described by faculty participants as strategies to strengthen school nursing political advocacy efforts.

As described above, political advocacy and knowing the law enables the nurse to competently educate school administrators, families and the community. One suggested way to stay current with legal issues is through participation in professional organizations such as NASN, ANA, and state school nurse associations. Encouragement for certification students to join professional organizations could occur in conjunction with program content addressing the school nurse roles and responsibilities, political activism, and advocacy efforts. These organizations provide valuable and current resources about legal issues, needs of the student population, and evidence-based research to support practice decisions. These professional entities also provide legal issue-related talking points, sample letters to legislators, and information on how to contact individual legislators. Additionally, attendance at local town hall, parent-teacher, and school board meetings are encouraged as part of various assignments related to leadership and legal issues and can be continued when working as a school nurse in the practice setting. School nurse certification students may be assigned to review a relevant, current legislative issue and then craft a letter to the appropriate legislator. This gives them experience in effective ways to carry out political advocacy. These exercises and activities are meant to keep the nurse aware of current issues facing the community and practice using their voice to affect change. Communicating with and educating legislators about community and school-based needs by calling, visiting, or letter-writing all serve to strengthen health promotion and disease prevention activities.

An important and often overlooked legal issue is understanding one's scope of practice. Considering the uniqueness of the school setting, which demands nurses to be highly capable of

critical thinking, situations may arise where serious reflection and consultation are required. The school health office can mimic an urgent care or emergency room at times with asthma attacks, seizures, panic attacks, serious injuries, drug use, and more. One faculty participant described that school nurses need to know their limits and seek consultation from peers and experts if unsure of legality or their own competence in managing certain issues. Certification program course descriptions contained language pertaining to educating students regarding the school nurse role with attention to scope of practice and related legal issues. Several programs contained courses dedicated to school nurse role, theory, and practice. Although students may enter a school nurse certification program with extensive specialty clinical experience, there are still situations that may arise where an unfamiliarity exists when it comes to school health. Examples may include caring for a student with a tracheostomy, a peripherally inserted central catheter, an insulin pump, or even an unfamiliar disease process. All of these may require the school nurse student and practicing certified school nurses to seek information from credible and reliable sources to support assessment, planning, and implementation of safe and competent care for students and families. Creating partnerships and relationships with local medical and academic facilities, utilizing professional continuing education resources, and collaborating with other school nurses are ways to bridge this gap. These strategies can be incorporated into certification programs through practicum experiences and discussion boards. Specifically, certification students may be asked to participate in case study discussions or interview legal nurse consultants from a professional organization in efforts to promote critical thinking and creativity in addressing scope of practice issues. This is also discussed further in recommendations related to collaboration. Such collaborative efforts should also be considered in relation to knowing the law and scope or limits of practice.

Having the ability to acknowledge limits of expertise then critically appraise where and how to seek out appropriate information are paramount in adhering to professional standards of practice. The literature supports integration of critical thinking skills in nursing programs to prepare nurses for practice while acknowledging that students cannot be prepared for all practice settings or situations (Myers et al., 2010). Participants emphasized the value in certification students understanding the unique scope of practice issues surrounding the situation of being the sole health care provider in an educational setting. The SOSNP (Appendix A) clearly define expected competencies in specific content areas for school nursing practice and these include ethics, evidence-based practice, leadership, communication, environmental health, and program management to name a few. It is imperative that the school nurse student be familiar with role expectations outlined in the SOSNP, applicable educational law, the school district job description, and scope of practice as outlined in individual state nurse practice acts. Student assignments could include online discussions or student presentations regarding scope of practice issues. In addition, students can learn firsthand about the school nurse role during clinical practicum experiences. Broussard and White (2013) and Newell (2013) make inferences to the standards of practice when describing areas of education to be addressed in baccalaureate nursing education. The value in understanding scope and standards of practice can be applied to graduate level and advance practice nursing as well.

**Theme three: Be an advocate.** The school nurse role in advocacy was emphasized repeatedly and framed in the context of being a voice for students, staff, the community, and the nursing profession. Advocacy efforts take form in the shape of political activism, planning and development of teaching programs, and collaborative efforts in planning care with the interdisciplinary team. School nurses are uniquely positioned to affect change by providing

teaching programs to students, working with stakeholders to ensure students are educated in the least restrictive environment, writing and calling politicians regarding healthcare legislation, and taking part in professional nursing organizational activities. Certification programs facilitate advocacy skills with assignments such as encouraging attendance at school nurse regional meetings and conferences, researching and writing about a current school health legislative issue, and development of health teaching projects for students and families. Within school health offices, school nurses are frontline advocates for student safety, health promotion, and care for acute and chronic illnesses and injury. All of these advocacy activities by school nurses support school-age student academic achievement and success both inside and outside of the classroom.

School nurses are faced with an assortment of advocacy-related roles and responsibilities in the school setting. Nurses may attend student assistance team meetings to evaluate and obtain services for students at-risk for mental health or substance use and abuse. A typical day may include the nurse serving as a counselor to the student with a panic attack, calling child protective services for reports of abuse, managing a student's dangerously low blood sugar, calling emergency medical services for an employee having chest pain, and evaluating concussion symptoms in an injured student. The nurse may also stay after school to administer influenza shots to students and staff, attend a parent-teacher meeting to talk about the need for safer playground equipment, and write a letter to a senator about healthcare legislation threatening access to care for students and their families. These are just a few examples of how nurses can and do advocate for all stakeholders in their midst including students, staff, the community, and the nursing profession. Certification programs may prepare students for the challenges of carrying out similar advocacy activities by utilizing strategies such as role-play in the classroom on how to address dealing with suspected child abuse or how to speak with a

legislator in person. The SOSNP competency for health teaching and promotion is based in advocacy efforts as evidenced in language describing promotion of health and a safe environment, particularly regarding health education (Appendix A).

A faculty member described attention to culture as an advocacy role and a gap between what is taught in certification programs and what is needed in the practice setting. Health professions training programs must enhance self-awareness and improve care by increasing knowledge and cultural competence skills (Diaz, Clarke, & Gatua, 2015). Cultural considerations are not limited to simple identification of ethnicity but may involve deeper exploration into factors such as values, beliefs, sexual orientation, age, and religion. The PDE (2016) requirements for certification as a specialist school nurse describe competence in dealing with health-related issues of diverse populations as necessary in holistically serving and meeting the healthcare needs of school age students and their families. Examination of curricula and course descriptions' reference to cultural considerations in development and planning of both direct health care services and educational programs was overtly lacking. Rather, attention to adapting teaching and care to the unique needs of the student was described in many course descriptions and assignments. Immigrants are driving overall workforce growth in the United States and increasing number of refugees are seeking asylum throughout the nation (Cilluffo & Cohn, 2017). Such changing demographic trends require attention to culture as a thread throughout curricula.

Certification programs need to incorporate cultural considerations for care of students and families in the school health setting by adding relevant content to both classroom and practicum experiences. This is supported by earlier mentioned findings by Ramos et al. (2014), Newell (2013), and Kruelen et al. (2008) when they assessed different components of school

nursing practice all touching on the same concept of academic preparation or continuing education of school nurses in meeting the needs of America's diverse school-age population. This could be done through use of online discussion or writing a topic paper on how various cultural norms may affect care of the student in the school setting. Attention to culture may be carried out in the practice setting with nurses seeking resources such as interpreters for English as second language (ESL) learners, appropriate medical providers, and coordinating attention to cultural sensitivity with administrators, food service, and physical education teachers if necessary. Certification students may become adept at providing culturally competent care by performing similar activities during clinical practicum hours and by conducting research into how various cultures perceive, access, and practice health care.

Attention to cultural needs of students and families is paramount in advocacy efforts when developing care plans within the school setting. School nurse certification requires effective communication with parent/guardians, other agencies, and the community at large to support learning by all students (PDE, 2016). Attention to culture goes hand-in-hand with the school nurse being able to communicate and provide care to diverse populations across Pennsylvania and the nation. Although the subject of cultural competence in developing educational programs surfaced during one interview, the participant described that students experienced being uncomfortable with how and where to address cultural differences. For example, when teaching diabetic students of different ethnicities, language barriers, unique dietary habits, activity levels, and access to resources are all considerations in planning, implementing, and evaluating effectiveness of teaching programs. Attention to cultural concerns such as fasting or prescribed strict dietary restrictions due to religious beliefs would need to be known to the nurse so proper education of staff and monitoring of the student could occur.

Thorough history taking that includes inquiry to culture and establishment of a trusted relationship between the student, family, and school nurse are essential in uncovering important information that influences healthcare planning. Shattell et al. (2013) findings encouraged weaving of culture throughout nursing curricula with assessment of cultural competency at the beginning and end of the program. Teaching school nurses, whether, as students or currently practicing nurses, about the principles of how to adapt teaching and program development to the cultural needs of the population can be instrumental in effective health promotion and disease management.

Earlier in the literature review, Kruelen et al. (2008) described how a partnership between school districts and university nursing programs resulted in nursing students better understanding special health care needs of children from diverse culture. Although these findings were from an undergraduate partnership, similar attention to cultural competency may be realized in a partnership between school nurse certification programs and school districts. Since certification programs already contain a clinical practicum component, incorporating attention to culture could be accomplished as part of clinical journal reflection, debriefing with faculty and peers after clinical, or creating a culturally sensitive individualized health action plan for a student.

Competency with physical assessment has been another area related to student advocacy. Despite some reported student resistance to the rigor of an advanced physical assessment course within a school nurse certification program, the added level of expertise is beneficial to all stakeholders including students, families, communities, and school nurses. It would be a valuable experience for school nurse certification students and practicing school nurses to take part in physical assessment review courses. This could be done formally at a university or by way of continuing education offerings and attendance at conferences. For example, conferences

may offer educational sessions on instruction in school-nurse requested topics such as tube feedings, peripherally inserted central catheter care, urinary catheterization, or tracheostomy care. Practicing school nurses and certification students may feel intimidated or embarrassed to acknowledge inexperience, lack of knowledge, or simply having not done a procedure in years as reasons why they might be hesitant to seek out review sessions. Again, this supports the need for school nurses and certification students to take part in continuing education activities where they may safely review and practice necessary assessment skills.

An innovative area to consider in improving school nurse assessment competency is with simulation. Kaddoura (2010) found that simulation helped new graduates to think critically and confidently make sound clinical decisions. Incorporation of a scenario-based simulation into school nurse certification programs may be part of a pragmatic solution in addressing the need for the highly autonomous school nurse to obtain advanced physical assessment skills. Simulation could be used in school nurse certification programming as well as for continuing education of practicing school nurses. For example, scenarios could be used that involve assessment and critical decision making for situations such as a possible drug overdose, an anaphylactic reaction, or asthma attack. Handley and Dodge (2013) reported that simulation can be used to strengthen key nursing skills and build confidence in nursing students. Removing or reducing this fear in both school nurse certification students and practicing school nurses may be accomplished by providing updates in a non-threatening, welcoming manner such as in small groups, use of simulation, or online interactive tutorials.

Assessment skills can be considered an integral part of all items in the SOSNP (Appendix A). For example, assessment guides diagnosis, outcomes identification, planning, and implementation. The implementation SOSNP includes coordination of care, health teaching,

consultation, and prescriptive authority for a nurse with an advanced practice degree. Specifically included within these requirements is the ability for physical and mental health assessment and recognizing symptoms of child abuse, substance abuse, teenage pregnancy, violence, and homelessness. Assessment plays a part in all of these standards plus those of evaluation, ethics, education, evidence-based practice, quality, communication, collaboration, and resources. The certified school nurse and the certification student's ability to holistically assess the student includes consideration of not only physical assessment findings but also those related to mental health, home life, environment, socioeconomic status, and more. As a result, health education competency and advocacy resonate from advanced physical and holistic assessment capabilities. For example, discovering a student has been suffering from the effects of substance abuse requires not only a complete physical assessment but lends itself to collaboration with the interdisciplinary team, possibly including guidance counselors, administrators, medical personnel outside the school, parents, and law enforcement. All of these areas of assessment and are outlined in the description of requirements by PDE (2016) (Appendix E) for certification as a specialist school nurse.

The fact that assessment is a significant part of certification standards belies the findings that only one certification program participant had a separate course devoted to advanced physical assessment. As mentioned in the findings, participants described difficulty providing and teaching a large amount of necessary information with limited time and resources. This might affect a program's decision to create and include a separate physical assessment course. Solving or addressing this issue could involve spending a portion of clinical time with an advanced practice nurse practitioner or participation in simulation scenarios specifically designed for the purpose of strengthening assessment skills. As mentioned earlier, certification students

do get practice with assessment skills while under the supervision of the certified school nurse during required clinical hours. Although this approach will continue, it may be worthwhile for certification programs to devote a course exclusively to physical assessment for school nurses. In support of a separate physical assessment course in school nurse certification programs, Anderson, Nix, Norman, and Pike (2014) identified a physical assessment practicum course as an opportunity to bridge the gap between what is learned in the classroom and what happens in the actual practice setting. Additionally, continuing education experiences such as webinars and conferences may help build school nurse assessment skills without a taxing time or financial commitment.

Advocacy is clearly a component of the health teaching and health promotion SOSNP (Appendix A) which describes the school nurse being competent in promotion of health and a safe environment, particularly regarding health education. In addition, school nurse advocacy efforts are evident and present in principles of communication, collaboration, professionalism, and critical thinking. As the discussion moves forward to leadership abilities of school nurses, advocacy roles and responsibilities will be evident.

**Theme four: Be a leader.** Faculty participants repeatedly mentioned school nurse development of leadership skills as a crucial part of management, advocacy, communication, and education skills. Leadership is not solely related to preparation of school nurses in the role of health educator but can be an essential quality or strength in supporting many roles. Although the health teaching and health promotion SOSNP competency (Appendix A) does not specifically mention leadership, such skills would be inherently supportive of an ability to develop and implement health education. There is a separate SOSNP addressing leadership in the professional school nurse practice setting. Dyess, Sherman, Pratt, & Chiang-Hanisko (2016) revealed findings

pointing to the benefits of nurses take on a gradual leadership role, over time, through leadership training. There is a growing need for nurses to be provided with training and mentorship prior to and in preparation for assuming a leadership role. Adding leadership training as part of a specific course or incorporating as a thread throughout curriculum in a certification program may help build competent school nurse leaders. Additionally, nurses new to school health being paired with an experienced mentor may provide the guidance and feedback for development of leadership abilities.

It is evident that faculty participants highly value and underscore the significance of leadership abilities of the school nurse. Interviews, assignments, and curricular threads described leadership qualities including strength in the ability to communicate, collaborate, know the law, advocate, and confidently express points of view. A return to the literature supports the value of leadership to prepare graduate nurses for transition to a different role. It has been found that competency in various areas such as leadership, use of evidence-based practice, and nurse as educator is key in preparation of graduate nurses, eases transition to practice, and is reflective of expertise in more experienced nurses (McHugh & Lake, 2010; Missen et al., 2014; Spoelstra & Robbins, 2010; Wolff et al., 2010).

Although certification programs lacked a specific course dedicated to nurse leadership, assignments encouraged critical thinking about the higher-level responsibilities that come with the school nurse specialty, including program planning and development, delegation of unlicensed personnel, participation in evaluation of staff, and policy development. For example, most programs require students to complete a needs assessment tailored to a specific population, develop a teaching plan, gather resources to implement the plan, and evaluate the effectiveness of the teaching intervention. Faculty participants shared that students may be overwhelmed,

intimidated, and unfamiliar with the added responsibility and initiative needed to incorporate other leadership tasks such as program planning and policy development into school nursing practice. Dyess et al. (2016) found current-day nurse leaders reporting concern that future nurse leaders may be reluctant, even fearful, of entering formal leadership roles. Often in current practice, nurses find themselves in a managerial or leadership position prior to having guidance or training. Leadership succession planning is a strategy increasingly being utilized to prepare nurses to assume leadership responsibilities and is meant to take be a gradual introduction to the administrative or management role. Having school nurse certification students and practicing school nurses attend leadership training or be paired with nurse leaders are ways to build leadership and management skills and knowledge prior to being thrust into such a role. Because this applies to the school health setting, attention to leadership succession planning for school nurses could be a measure addressed in certification programs and at the individual school district, regional, state, or national level. Ways to accomplish this for school nurses include certification programs having students interview nurses in leadership roles to learn more about various approaches to management. Additionally, assignments may include researching and reflecting about various leadership styles, role-play scenarios, and use of case studies that focus on leadership concepts. These leadership activities could be incorporated as a thread throughout the curriculum. Professional organizations such as NASN may direct continuing education efforts or seminar content at leadership training for school nurses.

**Theme five: Lack of teaching experience.** A theme emerged describing students as lacking in experience or ability to plan, prepare, and evaluate educational activities upon entry into the certification program despite highly competent clinical skills. Booth, Emerson, Hackney, and Souter (2016) supported the notion recognizing that “education and nursing are two

distinctive disciplines and clinical expertise does not naturally result in teaching expertise” (p. 54). Repeatedly, faculty participants described nurses entering certification programs with high levels of clinical experience and expertise but lacking in knowledge of pedagogy, lesson planning, implementation, and evaluation of teaching. Clinically, nurses are providing incidental and semi-formal teaching seamlessly while delivering patient care.

Interviewees described nurses as “natural born teachers” and “every moment is a teachable moment”. From this, it is realized that nurses inherently teach and teach often based on patient or client needs. However, school nurse students may not be experienced or well-informed on pedagogy, program planning, or evaluation when it comes to providing more formalized education to larger groups such as students in a classroom, parents at a parent-teacher organization meeting, or administrators at a school board meeting. Although all certification programs have students plan and develop teaching projects, very few contain a specific course devoted to teaching methods and program development. Booth et al. (2016) described entry-level teaching skill be based in knowledge of pedagogy, understanding curricular structure, and competency in research.

The literature review revealed that school nurses feel unprepared when providing health education. Literature supports the perception that school nurses have not been made ready for the more formal classroom teaching experience. Borawski et al. (2015) reported that high school students described school nurses as less prepared and less at ease in teaching when compared to classes taught jointly by nurses and teachers. Despite this description, school nurse led teaching has resulted in student changes in health care related knowledge and beliefs. In the same study, Borawski et al. (2015) reported that nurses teaching in the classroom along with a classroom teacher, made lasting and valuable contributions to a student’s knowledge base. As faculty

participants detailed the angst surrounding transition to the educator role for school nurse students, they suggested that curriculum, pedagogy, and clinical assignments be designed in such a way to lessen anxiety and build competence and confidence with teaching. For example, a curricular thread related to nurse as health educator would bring principles of pedagogy, program planning, and evaluation to every course.

Nursing professionals enrolled in certification programs have been described by faculty as experienced, often veteran clinicians, who frequently struggle with transition to the multi-faceted school nurse role. Revelation of this theme prompted a return to the literature, which recognized that movement from being skilled in a particular nursing specialty area to novice teacher is demanding. Weidman (2013) found that movement from the role of expert clinician to that of nurse educator can be challenging due to lack of knowledge, skill, or experience with teaching. Benner (2001) related “how difficult it is for the expert clinical nurse to break down step by step the solution to a situation, but this is what is exactly required for the novice to make the transition to a new role” (as cited in Weidman, 2013, p. 107). Faculty acknowledge the need to remain sensitive to and respectful of the challenges faced by school nurse certification students throughout this shift in roles. School nurse certification students are making the transition to the school nurse role where competency in health education is expected as a standard of practice and the PDE job description. Passage from expert clinician to educator is a consideration in curriculum planning and development described by faculty participants. In examining transition from clinician to novice nurse educator, Grassley and Lambe (2015) found that effective movement to the educator role requires guidance and support from a mentor and practical experience and orientation to teaching theory and strategies. Although school nurses are not providing education to the same degree as academic nursing faculty, similar strategies of

formal preparation for teaching and structured mentoring programs may benefit the school nurse student's transition to the health educator role. Certification programs can help achieve this goal through classroom content on pedagogy, program development, teaching to peers, and in the clinical practicum experience through actual teaching under the supervision of a mentor or faculty.

School nurses have described factors such as lack of training in content areas, time, and resources as roadblocks to developing and implementing educational programs (Khubchandani, et al., 2013). Breaching these barriers may involve innovation in continuing education and resource allocation. School nurses may campaign for recruitment of qualified nurses prepared to substitute as needed. This facilitates the school nurse's ability to get out of the health office and into the classroom to support health education efforts. Certification programs can prepare students to lobby for resources that allow them to prepare and implement teaching programs through leadership training and experiences meant to build strengths in being a knowledgeable, powerful, and well-spoken advocate for themselves and school nurses within their district. For example, school nurse certification students can utilize simulation or case study scenarios designed to help them understand how to have conversations with administrators regarding the importance of having time, resources, and proper training.

The Pennsylvania State Education Association (PSEA) (2017) job description for certified school nurses describes responsibilities such as arranging for staff to receive education in relevant areas such as first aid, safety, and present-day school health matters. Citing reliable and trusted sources such as the PSEA job description and the SOSNP give the certified school nurse strong support to voice and advocate for the time and resources to plan and implement educational health prevention and promotion activities. Certification program assignments and

experiences requiring students to become well read in the PSEA job description and the SOSNP will prepare them to advocate for well-trained staff, resources to allow attendance at continuing education and professional conferences, and time to prepare health promotion programs. An implication, which will come up again in collaboration and advocacy, is having the certification student understand how to utilize the interdisciplinary team in program development.

Recruitment of help from available resources such as teaching staff, guidance counselors, student teachers, parents, and administration may ease this stress and burden. Certification programs may prepare the student for familiarity with the school-setting interdisciplinary team by having them attend and participate in IEP, wellness, student assistance, or school safety meetings. Certification students may also benefit from classroom discussions and evidence-based case studies describing the value of interdisciplinary team involvement in enhancing educational efforts in the school setting.

Other teaching efforts important in certification programs may involve creativity and dedication to organizing and planning health promotion and prevention activities for after school hours. Examples of innovative programs may include cooking lessons, walking clubs, or yoga classes. Overall, school nurses are tasked with assuming a high level of responsibility and accountability for their own preparation as an educator and for continuing education and program development. From this, certification programs may have students develop an innovative teaching project that could be carried out in collaboration with other school staff or community resources such as the American Heart Association or nutritionists. The health teaching SOSNP strives to have nurses employ “strategies to promote health and a safe environment, especially regarding health education” (ANA, 2011, p. 44). The collaboration SOSNP calls for the school nurse to work with families and others in the provision of

professional nursing practice. Therefore, collaboration and health teaching content and assignments within the school nurse certification curriculum are working to strengthen the student's ability to teach in a competent and effective manner.

**Theme six: Collaboration.** Participants have described development of collaborative relationships as the key to helping relieve isolation and provide professional support to the school nurse who is often the sole medical provider in an educational setting. School nurses may achieve this by maintaining regular contact with other school nurses within their district, attendance at regional, state, or national professional meetings, and being active in professional organizations such as NASN. One participant summarized concerns of working in silos, understanding scope of practice, advocating for self and profession, and understanding how to balance nursing and educational law this way: "It's often a rude awakening when nurses come from a hospital or acute care setting to basically working out of a closet, alone, with sparse resources." She advised school nurses and certification students to seek support from other school nurse professionals to see how they manage limited resources, effectively collaborate with educational administrators, and understand interdisciplinary team dynamics. Certification programs can encourage and promote collaboration through pairing of students with experienced certified school nurses for practicum experiences.

Collaboration between academia and school nurse practice partners may be instrumental in learning how to more fully integrate culturally appropriate care, help nurses become more proficient with use of technology for documentation and teaching, and develop evidence-based resources. Such practice partnerships can help address weaknesses in education and preparation of new nurses for the workplace (Hudacek, Dimattio, & Turkel, 2017). Additionally, secondary gains from such partnerships as described at an undergraduate nursing level included role

modeling of school nursing to school-age youth and allowing school nurses a glimpse at the educator role and responsibilities (Kruegen et al., 2008). Similar academic-practice partnerships can occur informally by way of continued contact between school nurse certification faculty and former students who continue to practice school nursing. The American Association of Colleges of Nursing and the American Organization of Nurse Executives' (2012) academic practice partnership guiding principles describe that holding regularly planned meetings and open discussions about current practice and education in nursing are essential to advance nursing practice and improve the quality of health care. More formal partnerships may take the form of school nurse focus groups or coalitions between certification programs and professional school nurse organizations such as NASN. Such alliances would be designed to evaluate current school nurse education needs which may then drive curricular changes or content. For example, school nurses may serve on advisory boards of universities and provide curricular recommendations based on current practice. Taking this type of collaboration to a higher level, cooperative efforts between school nurse leadership, academia, departments of education and state boards of nursing would facilitate review of SOSNP and how they are being utilized, or not, in training of school nurses and school nurse certification program curricula.

Faculty participants reported networking with other school nurses and medical professionals as a key factor in easing transition and supporting one another. In part, the practicum experience itself and journal writing assignments are aimed at promoting reflection of the value in establishing a mentoring relationship and working collaboratively with an interdisciplinary team. Assignments such as topic papers and discussion boards provide a forum for dialogue related to collaboration, often in terms of the interdisciplinary team roles. Previous literature supports the value of nurse residency programs, development of core competencies,

critical thinking, use of evidence-based practice, and support of a preceptor or mentor enhancing job satisfaction, retention, and confidence during role transition (Missen et al., 2014; Spoelstra & Robbins, 2010). School districts with more than one certified school nurse may have the luxury of utilizing a mentor or preceptor who is easily accessible on a more regular and immediate basis. Certification programs can aid students in developing mentoring relationships through encouragement of networking within professional organizations at national, state, or regional levels. For example, blogs and discussion boards within these organizations permit nurses from across the state or nation to share experiences and ask questions without leaving their offices. Students can also benefit from school and community-based meetings where members of various disciplines may be present. For example, attendance at an opioid or immunization coalition meeting will expose the student to the roles of team members such as law enforcement, emergency medical services, counselors, and department of health personnel. Participation in such events creates networking opportunities for students.

Despite lack of school nurse specific evidence, in general, preceptor relationships have shown many benefits during transition to practice, including a reduction in anxiety, constructive criticism being received in a non-intimidating way, and greater likelihood of staying in a job (Hickerson, Terhaar, & Taylor, 2016). All certification students spend a minimum of 100 hours in the clinical setting with a PDE certified school nurse. During this time, the student benefits from extended time with an experienced mentor, gaining knowledge in school health policy, assessment, budgeting, time management, and collaboration with the interdisciplinary team. Such a time intensive pairing may build lasting mentor-type relationships that extend beyond the practicum period. The novice school nurse may now seek advice and guidance from this experienced resource.

Faculty routinely encourage certification students to network and establish relationships with fellow school nurses and not limit this to nurses in their home district. They encourage certification students to make connections with local, state, and national peers via attendance at association meetings, conferences, continuing education offerings, and through online sources such as professional blogs and webinars. Collaborative relationships need not be limited to other school nurses. The theme of collaboration and the need for the certification student and newly practicing school nurse to seek supportive relationships from more knowledgeable school nurses, professional organizations, and other members of the school-healthcare team is supported in both the collaboration and health teaching SOSNP competencies (Appendix A). The collaboration SOSNP competency calls for cooperation with health care consumers, families, and other team members in professional school nursing practice while the health teaching SOSNP competency builds upon such collaboration in promoting health education. Seeking input and support from a variety of places such as teaching staff, administrators, and community resource teams can be a source of gaining others' perspectives and support.

### **Meanings and Understandings**

In summary, themes of having a voice, knowing the law, advocacy, leadership, preparation to teach, and collaboration all point to issues of preparing skilled clinicians for transition to an advanced practice, autonomous role as a school nurse. All play a part in training the school nurse for preparation to practice in the role of an educator. Speaking about the unique qualities and benefits of having school nursing professionals highly attuned and capable of meeting the needs of today's students, families, and communities is invaluable for health prevention and promotion.

Findings may spur further research into outcomes and benefits of school nursing. Preparation of nurses to practice in school settings is dependent upon a wide variety of state regulations without consistency throughout the nation. Standardization of credentialing of school nurses across the country may be recognized by lawmakers, education officials, and professional nurse governing boards as not only an option but as a standard of care for the nation's school-age population. It is phenomenal to believe that professional school nurses have the potential to be instrumental in managing the health and well-being of over 50.4 million students enrolled in public schools (United States Department of Education, National Center for Education Statistics, 2016).

The aim of the study was designed to answer the research question: How have school nurses been prepared to act as a health educator in meeting the complex health needs of student populations according to the ANA/NASN School Nursing Health Education and Promotion Standard of Practice? In answering this question, themes surfaced describing several factors contributing to the preparation of school nurses for the role of being an educator. Leadership and assertiveness help prepare the school nurse to speak and educate students, families, communities, and administrators in an effective, intelligent, and confident manner. Certification program curricula, assignments, teaching strategies, and clinical experiences demonstrate qualities that promote preparation to practice as a health educator, leader, advocate, and interdisciplinary team member.

Participants described nurses entering the very autonomous school nurse role in need of “having a voice” and “getting out of the health office to be visible and spread the word” about their role and responsibilities. Building upon this, nurses that are comfortable, prepared, and competent teaching and speaking in front of groups will clearly and skillfully advocate for

students, families, community, faculty, and the nursing profession. Helping answer the research question were examination of curricula, course descriptions, researcher field notes, and clinical experiences. Although curricula varied by program, commonalities included content in the following areas: policy/legislation, special education, educational psychology, and clinical time spent in the school setting with a certified school nurse. Such content areas and subsequent discussions and assignments help describe how school nurses are prepared to help meet the complex needs of student populations.

The following proposition was made prior to data collection: It is suspected that school nurse certification curriculum and clinical experiences may not be reflective of health education practices necessary to meet the needs of current day school nurse practice. Curricula in all programs contained at least one significant teaching project to be implemented in the clinical setting, the classroom, or both, with the audience being students, school staff, peers, or the community. Programs guide students through a process in research and development of evidence-based teaching lessons. Several participants, but not all, described an audience or population-based needs assessment guiding collection of evidence-based teaching information followed by creating a lesson plan, tips on how to implement the teaching lesson, and how to evaluate a program. Although school nurse certification students have been described as not being prepared to teach upon entry to the program, curricula, course content, and assignments are elements indicative of organized efforts to make school nurses ready for the challenges of being an educator.

These types of teaching-learning activities and course content are meant to prepare the school nurse certification student with the principles necessary to act as a health educator. A specific aim of this project has been to describe strategies school nurse certification programs are

employing to prepare nurses to assume the role of health educator according to the ANA/NASN School Nursing Standards of Practice. This has been accomplished through extensive review of course descriptions, teaching and learning strategies, clinical experiences, and interviews with experienced faculty teaching in school nurse certification programs.

School nursing educational activities are not one-size-fits-all, therefore the importance of knowing basic principles of pedagogy, conducting needs assessments, and evaluation are crucial in school nurse preparation to practice in the role of health educator. The second aim of the study has been to determine if there are gaps in school nurse certification programs in the area of health education and teaching. A gap identified by faculty participants included the possibility that course content and curricula might not be current with changes in the actual school health setting. In acknowledging this challenge, it can be noted that school nurse certification programs are equipping students with the information and skill-base necessary to move into the school setting and act in the role of health educator. The onus is then on the certified school nurse to build and develop these skills into their professional practice. To stay current with present-day school health climate, certification programs need to constantly evaluate needs of school nurses and tailor curricula, course content, and clinical activities to meet those needs. Additionally, school nurses serving on university or college advisory boards would help ensure program content is current and relevant to the practice setting. Such collaborative efforts will ensure both academia and practicing school nurses are working to assure provision of competent health care providers in the school setting.

Building upon implications and recommendations for practice from this study, continued research into school nurse preparation to practice could be replicated in an effort to compare and contrast findings. Although replication of this study might generalize findings to a larger

population, consideration of school nurse preparation to practice heard through the voice of practicing school nurses or certification students would provide additional perspective.

Exploration of preparation to practice from the school nurse or certification student point of view may provide insight into current day practice and educational needs not only for certification programs but also for continuing education, content at local, state, and national conferences, and development of educational resources such as textbooks and webinars. Movement from case study methodology to a mixed-methods approach may yield a combination of rich descriptive narratives coupled with objective data. For example, holding separate focus groups with school nurse certification students, practicing school nurses, and faculty would permit a widely varied and extensive exploration of school nurse preparation to practice. Addition of surveys and questionnaires may provide objective assessment of educational needs with practice.

### **Summary**

The purpose of this study was to explore and describe health education competency activities in both classroom and clinical settings within school nurse certification programs. Interviews and discussion with eight faculty teaching or having taught in a school nurse certification program and examination of course descriptions, assignments, curriculum, and researcher field notes, resulted in themes describing curricula that emphasized evidence-based development and evaluation of health teaching by the school nurse. This is consistent with key components of the SOSNP health education competency.

Although curricula varied by program, commonalities included content in the following areas: policy/legislation, special education, evidence-based teaching, and clinical time spent in the school setting with a certified school nurse. Such content areas, classroom discussions, and assignments help describe how school nurses are being prepared to help meet the complex needs

of student populations. Themes of having a voice, knowing the law, leadership, advocacy, collaboration, and lack of teaching experience were identified. All play a part in training the school nurse for preparation to practice in the role of health educator. Speaking about the unique qualities and benefits of having school nursing professionals highly attuned and capable of meeting the needs of today's students, families, and communities is invaluable for health prevention and promotion.

Although school nurse certification students were described by faculty participants as not ready to teach upon entry into the program, curricula, assignments, and clinical experiences indicate an organized effort to prepare them for the role of health educator. Seeking to explore school nurse preparation to practice in the health educator role led to identification of various other characteristics linked to professional school nurse practice. Faculty participants consistently described the need for both novice and veteran school nurse certification program students to seek out mentorship and networking opportunities to support one another in problem-solving, critical thinking, and relieving the isolation of working as the sole medical professional embedded within an educational setting. Participants also pointed to the significance of nurses entering the highly autonomous field of school nursing becoming competent in leadership skills as this gives "a voice" to school nursing as a profession and for the individual. Leadership skills were also referenced in relation to advocacy and development and implementation of educational activities. Broussard & White (2013) characterized these qualities in school nurses as they demonstrate competency in various leadership roles and carry out responsibilities such as interdisciplinary care coordination and provision of health promotion education. A balanced combination of leadership and assertiveness helps prepare the school nurse to speak and educate

students, families, communities, and administrators in an effective, intelligent, and confident manner.

Findings indicated that school nurse certification programs have curricula, experienced faculty, and both classroom and clinical activities meant to prepare school nurses for the role of health educator according to the PDE-required essentials for certification as an educational specialist and the SOSNP. Points in need of further investigation are those related to how certification program curricula and activities can stay current with changing demands to school nursing practice and keep in step with SOSNP. Additionally, exploration into the school nurse certification student and practicing school nurse perspective may confirm findings of this study or reveal additional areas significant to preparation to practice.

Themes of having a voice, knowing the law, advocacy, leadership, preparation to teach, and collaboration all point to issues of preparing skilled clinicians for transition to an advanced practice, autonomous role as a school nurse. All play a part in training the school nurse for preparation to practice in the role of an educator. Speaking about the unique qualities and benefits of having school nursing professionals highly attuned and capable of meeting the needs of today's students, families, and communities is invaluable for health prevention and promotion.

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## Appendix A

### Standards of School Nursing Practice

(American Nurses Association, 2011)

Standards of Practice for School Nursing		
Standard of School Nursing Practice	Definition	Sample Competency
Standard 1: Assessment.	The school nurse collects comprehensive data pertinent to the health care consumer's health and/or the situation.	The school nurse is able to collect, analyze, and prioritize data collection.
Standard 2: Diagnosis.	The school nurse analyzes the assessment data to determine the diagnoses or issues.	School nurse analyzes and synthesizes data to determine the nursing diagnosis to meet consumer's health needs.
Standard 3: Outcomes identification.	The school nurse identifies the expected outcomes for a plan individualized to the health care consumer or the situation.	The school nurse identifies the health care consumer's expected outcomes and develops an IHP based on scientific evidence.
Standard 4: Planning.	The school nurse develops a plan that prescribes strategies and alternatives to attain expected outcomes.	The school nurse develops an effective plan to meet the identified expected outcomes.
Standard 5: Implementation.	The school nurse implements the identified plan.	The school nurse implements the plan of care in the school setting and provides education and direction to the staff as needed.
	Standard 5A: Coordinator of care.	The school nurse coordinates care delivery.
	Standard 5B: Health teaching and health promotion.	The school nurse employs strategies to promote health and a safe environment, especially regarding health education.
	Standard 5C: Consultation.	The school nurse provides consultation to influence the identified plan, enhance the abilities of others, and effect change.
	Standard 5D: Prescriptive authority and treatment.	The advanced practice registered nurse uses prescriptive authority, procedures, referrals, treatments, and therapies in accordance with licensure.

		state and federal laws and regulations.	
Standard 6: Evaluation		The school nurse evaluates progress toward attainment of outcomes.	The school nurse evaluates and documents the plans of care.
Standard 7: Ethics.		The school nurse practices ethically.	The school nurse is an ethical practitioner.
Standard 8: Education.		The school nurse attains knowledge and competence that reflect current nursing practice.	The school nurse continues to actively seek educational opportunities.
Standard 9: Evidence-based practice and research.		The school nurse integrated evidence and research findings into nursing practice.	Uses current evidence-based nursing knowledge, including research findings, to guide practice.
Standard 10: Quality of practice.		The school nurse contributes to quality nursing practice.	The school nurse is a quality care provider and contributor to nursing practice.
Standard 11: Communication.		The school nurse communicates effectively in a variety of formats in all areas of nursing practice.	The school nurse uses effective communication techniques.
Standard 12: Leadership.		The school nurse demonstrates leadership in the professional practice setting and the profession.	The school nurse is an effective leader.
Standard 13: Collaboration.		The school nurse collaborates with the health care consumer, family, and others in the conduct of nursing practice.	The school nurse collaborates effectively.
Standard 14: Professional practice evaluation.		The school nurse evaluates one's own nursing practice in relation to professional practice standards and guidelines, relevant statues, rules, and regulations.	The school nurse ethically evaluates one's own practice.
Standard 15: Resources		The school nurse utilizes appropriate resources to plan and provide nursing services that are safe, effective, and financially responsible.	The school nurse utilizes resources in an effective manner.
Standard 16: Environmental health.		The school nurse practices in an environmentally safe and healthy manner.	The school nurse maintains a safe environment.
Standard 17: Program management.		The school nurse manages school health services.	The school nurse is an effective manager.

Appendix B  
Informed Consent

Identification of Health Education Competency in School Nurse Certification Programs

February 10, 2017

Dear Colleague,

You are invited to participate in this research study. The following information is provided in order to help you to make an informed decision whether or not to participate. If you have any questions, please do not hesitate to ask.

The purpose of this study is to examine faculty identification of health teaching competency within school nurse certification programs. Participation in this study will require approximately 20-30 minutes of your time. An interview session with nurse faculty who have taught coursework in a school nurse certification program within the last 3 years will occur with researcher and participant at a mutually-agreed upon location and time. Interviews will be held in a one-on-one fashion, either in person or via telephone. Participants will be provided with the semi-structured interview guide and a copy of the School Nursing Standards of Practice prior to meeting. With permission, the interview will be recorded. As a thank-you for your valuable contribution to this research study, a \$10 Visa brand gift card will be presented to you in person or mailed to you at the close of the interview.

You may find the interview process a useful exercise in reflection and contemplation. The information gained from this study may help in better understanding if school nurses are being adequately prepared to effectively manage the acute and chronic conditions present in contemporary school nursing practice. There are no known risks or discomforts associated with this research.

Your participation in this study is voluntary. You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigators or Indiana University of Pennsylvania. Your decision will not result in any loss of benefits to which you are otherwise entitled. If you choose to participate, you may withdraw at any time by notifying the person conducting the interview. If you choose to participate, all information will be held in strict confidence. The information obtained in the study may be published in scientific journals or presented at scientific meetings, but your identity will be kept strictly confidential.

**If you are willing to participate in this study, please respond to this email so we can arrange a meeting. Please feel free to forward this email invitation to any colleagues who may be eligible to participate.** If you have any questions about this survey and/or would like to

participate, please contact Melinda Barrett, the project director, by telephone at 570-939-7306 or by email at [nqht@iup.edu](mailto:nqht@iup.edu). Your insight and contribution to this research is highly valuable.

**Project Director:**

Ms. Melinda Barrett, MSN, RN

Doctoral Student

Ph: 570-939-7306

Email: [nqht@iup.edu](mailto:nqht@iup.edu)

**Faculty Sponsor:**

Dr. Kristy Chunta

Professor

Nursing and Allied Health Professions

233 Johnson Hall

1010 Oakland Avenue

Indiana University of Pennsylvania

Indiana, PA 15705

Phone: 724-357-2408

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-7730).

**VOLUNTARY CONSENT FORM:**

I have read and understand the information on the form and I consent to volunteer to be a subject in possible this study. I understand that my responses are completely confidential and that I have the right to withdraw at any time. I have received an unsigned copy of this Informed Consent Form to keep in my possession.

Name (PLEASE PRINT): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone number or location where you can be reached: \_\_\_\_\_

Best days and times to reach you: \_\_\_\_\_

I certify that I have explained to the above individual the nature and purpose, the potential benefits, and risks associated with participating in this research study, have answered any questions that have been raised, and have witnessed the above signature.

Investigator's Signature/Date: \_\_\_\_\_

## Appendix C

### Semi-Structured Interview Questions

Interview questions are based on the *School Nursing Scope and Standards of Practice* and the *Essentials of Master's Education in Nursing* documents describing health teaching and health promotion competency. The questions are rooted in health education, specifically the objectives of the SOSNP Health Education and Promotion competencies (Appendix A).

Introductory interview script: Hello, my name is Melinda Barrett, a doctoral nursing student at Indiana University of Pennsylvania. I am conducting case study research to examine how school nurse certification programs in Pennsylvania prepare school nurses for the role of health educator. I will keep your contact information with your interview responses in case I have additional questions. I will destroy that contact information when the final report is complete. Your identity will remain anonymous and not be used in any presentation of findings to others. My field notes will be in a password-protected file on my laptop computer. With your permission, I would like to tape this interview so that I can make an accurate transcript. The tape will be erased as soon as the transcript is completed. Do you have any questions about me, my research, or our interview before we begin?

1. Describe how your curriculum prepares the school nurse for the role of health educator.
2. What teaching/learning strategies or assignments do you use?
3. Part of the health teaching competency includes technology. Tell me how your curriculum prepares students in these areas.
4. In your personal experience teaching in a school nurse certification program, share what you feel are the most critical needs in preparing nurses for practice in the school setting?

5. Tell me about any potential gaps you feel exist in the curriculum in relation to health teaching competency.

Appendix D

Demographics Form

What is your gender?

- Female
- Male

What is your date of birth? MM/DD/YYYY \_\_\_\_/\_\_\_\_/\_\_\_\_\_

What was your entry level education into nursing?

- Licensed Practical Nurse/Licensed Vocational Nurse
- Diploma
- Associate's Degree
- Bachelor's degree
- Other \_\_\_\_\_

What is your highest educational degree earned?

- Licensed practical nurse/licensed vocational nurse
- Diploma
- Associate's degree
- Bachelor's degree
- Master's degree
- Doctorate
- Other \_\_\_\_\_

Is your highest educational degree earned in nursing?

- Yes
- No

If no, please describe (Master's in Education, Doctor of Science, etc.).

---

What are your total years of nursing experience?

- 0-5
- 6-10
- 11-15
- 16-20
- 21 or more

Do you have experience working as a school nurse?

- Yes
- No

If yes, how many years? \_\_\_\_\_

Do you have school nurse certification?

- Yes
- No

Indicate your current employment status. Mark all that apply.

- Full-time
- Part-time
- Substitute/casual
- Adjunct
- Other, please describe. \_\_\_\_\_

What are your total years teaching nursing?

- 0-5
- 6-10
- 11-15
- 16-20
- 21 or more

At what type of institution do you teach?

- Private
- Public

Are you a member of any professional nursing organizations?

- Yes
- No

If yes, please list professional nursing organizations to which you belong.

## Appendix E

### School Nurse Educational Specialist Requirements

(Pennsylvania Department of Education, 2016)

#### **I. Knowing the Content**

The professional education program provides evidence that candidates for School Nurse certification have a Bachelor of Science in Nursing (BSN) degree, current license as a Registered Nurse, and have demonstrated their knowledge of and competence in providing for the health care needs of children and youth (K-12) including:

##### I. A. Providing information and services in school health related areas including:

- promotion of health education and health practices,
- of community and school health needs,
- physical and mental health assessment of children and youth,
- development, management, and evaluation of the school health program,
- prevention, identification, and control of communicable diseases,
- counseling techniques, referral, and health care management of children and youth,
- case management of health needs of children and youth,
- competence in dealing with health related issues of diverse populations,
- child and adolescent development,
- educational psychology

##### I.B. Recognizing symptoms and consequences of safety and environmental factors including:

- child abuse,
- substance abuse,
- teenage pregnancy,

- violence,
- homelessness and poverty,
- emergency response and crisis intervention planning,
- safe and healthy school environment

I.C. Assessing, documenting and managing the health care needs of children and youth with disabilities in the least restrictive environment including:

- technological care,
- nutrition,
- medication,
- participation in multidisciplinary meetings,
- development of an individualized plan of health care

I.D. Regulatory, ethical and professional issues and responsibilities governing the provision of health care services in the schools including:

- Federal, state and local laws and regulations which impact children and youth,
- Pennsylvania State Professional Nurse Law,
- Pennsylvania school code and regulations,
- American Nursing Association/National Association of School Nurses code of ethics,
- privacy and confidentiality,
- child and parental rights

## **II. Performances**

The professional education program provides evidence that each School Nurse certification candidates are assessed and demonstrate competence in the above content areas during participation in early field experiences and a required practicum. The early field experiences and

practicum must be in diverse settings and educational levels while under the supervision of a certified school nurse.

### **III. Professionalism**

The professional education program provides evidence that each School Nurse certification candidate demonstrates knowledge of and competencies in promoting professionalism in school and community settings including:

III.A. Professional journals, organizations and other sources of professional development

III.B. Integrity and ethical behavior, professional conduct as stated in Code of Professional Practice and Conduct for Educators; and local, state, and federal laws and regulations

III.C. Collaboration with other professionals

III.D. Effective communication with parent/guardians, other agencies and the community at large to support learning by all students